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ABSTRACT

This volume of contrastive studies of English and Polish includes the following papers: (1) "Contrastive Analysis in a New Dimension," by Tomasz P. Krzeszowski; (2) "On the Feasibility of Pedagogical Contrastive Sociolinguistics," by Karol Janicki; (3) "The Lexicon and Contrastive Language Studies," by Miroslaw Nowakowski; (4) "Variation and Argumentation in Phonology," by Edmund Gussmann; (5) "Contrastive Phonostylistics," by Jerzy Rubach; (6) "Semantic Equivalence and Style," by Nina Nowakowska; (7) 'Material Modifiers in English and Polish Nominal Phrases," by Barbara Fedorowicz-Bacz; (8) "The Element of Negation in English and Polish Comparative Constructions," by Alicja Pisarska; (9) "A Confrontation of 'Say,' 'Speak,' 'Talk,' 'Tell' with Possible German Counterparts," by Dorothea Lehmann; (10) "Syntactic Function of Negative Prefixes in English and Polish Participial Adjectives," by Barbara Fedorowicz-Bacz; (11) "Teaching English Articulatory Settings to Polish Learners," by Janina Ozga. (CFM)

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THE POLISH-ENGLISH CONTRASTIVE PROJECT

PAPERS AND STUDIES IN CONTRASTIVE LINGUISTICS

VOLUME SIX

Editor: JACEK FISIAK
Assistant to the editor: KRYSTYNA DROŻDZIAŁ

POZNAŃ 1977
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CONTRASTIVE ANALYSIS IN A NEW DIMENSION

TOMASZ P. KRZESZOWSKI

University of Łódź

Traditional CA's are all conducted along the *horizontal* dimensions necessarily involved in comparing an element or a class of elements in L_1 with an equivalent element or a class of elements in L_2 and/or vice versa. The traditional luggage of CA must, therefore, contain a set of statements motivating the movement from a specific element in L_1 to a specific element in L_2. These statements must be based on semantic considerations associated with the notion of *equivalence* (Halliday et al. 1964; Catford 1965; Krzeszowski 1967) and also on structural (syntactic and morphological) considerations associated with the notion of *congruence* (Krzeszowski 1967; Marton 1968). The linguistic nature of elements selected for comparison is strictly dependent upon a particular linguistic theory employed in the description of the compared languages. These elements can be systems (phonological, morphological, syntactic, etc.) or subsystems (plosives, personal pronouns, non-finite clauses, etc.) in L_1 and L_2. A comparison of systems and subsystems is usually associated with the adoption of structural theories as foundations for CA. It is also possible to contrast various types of *constructions* in the compared languages, e.g. passive constructions, relative constructions, nominal constructions, etc. Such comparisons can be conducted within nearly all types of theoretical frameworks, including traditional approaches to grammar. Finally, it is also possible to conduct research into a comparison of specific *grammatical rules* in L_1 and L_2. Within the theoretical framework of transformational generative grammar it is thus possible to compare such rules as subject raising, adjective placement, interrogative inversion and many others. A contrastive analysis, in this case, results in statements about the obligatory or optional status of the compared rules, their ordering and their presence or absence in the compared languages.

In all three types of comparison the notion of equivalence is the crucial one. It provides the necessary criterion of comparability: only equivalent systems, constructions and rules are comparable. Since the notion of equivalence has received a thorough treatment in the literature, especially with respect to the equivalence of constructions (Krzeszowski 1967, 1971, 1974; Marton 1968) we need not concern ourselves with this problem here.

As was remarked at the outset of the present paper, all contrastive analyses based on the notion of equivalence are conducted along what may be called a horizontal dimension involving movement from L_1 to L_2 and vice versa. The comparative technique requires isolating a system or a construction or a rule in L_1 and matching it for comparative purposes with an equivalent system, construction or rule in L_2. One can also start with L_2 and look for equivalent systems, constructions and rules in L_1.[1]

The horizontally organized contrastive analyses of systems and constructions across languages originated with Lado (1957) and continued to flourish in various theoretical frameworks. They resulted in inventories of differences and similarities between the compared items. Some attempts were also made to quantify these differences and similarities according to what was believed to reflect the amount of difficulty involved in learning these items in the process of second language acquisition. What resulted from such attempts were *hierarchies of difficulties* correlated in an intricate, though apparently motivated way with degrees of similarly (or difference) between the compared items. This correlation was based on the assumption that "differences are the chief source of difficulty in learning a second language." (Lado 1964:21). The phenomenon involved in these difficulties was called *interference*, i.e. "difficulty in learning a sound, word or construction in a second language as a result of differences with the habits of the native language" (Lado 1964: 217). Interference was thus believed to be in inverse proportion to the degree of similarity between the compared items. Consequently, attempts were made to relate "hierarchies of difficulties" to contrastive statements concerning degrees of difference across languages (Stockwell, Bowen and Martin 1965; Stockwell and Bowen 1965). Experiments soon invalidated a large portion of such predictions (Brière 1968; Politzer 1968) and called in question the relevance of CA in designing materials for foreign language instruction. The scepticism was reinforced by the realization that interference (or negative transfer) is not exclusively related to differences across languages and that the results of CA can be used only to a fairly limited extent in the prediction of errors. This situation led some investigators to the belief that error analysis was a more accurate source of information about difficulties in foreign language learning. Eventually, what was originally intended as "a method to test the contrastive prediction and extend its power of pedagogical applications" (Banathy and Madarasz 1969) became an autonomous field of study, more useful in syllabus planning and in designing materials for foreign language instruction than CA.

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[1] It must be noted that the notion of equivalence is not the same for each type of comparison. Equivalence of systems expresses a different relation than equivalence of constructions and sentences and equivalence of rules. In horizontally organized contrastive analyses each type of equivalence requires its own independent motivation and explanation. See, for example, an attempt to establish equivalence of phonemes in Milewski (1962) and some amendments suggested by Krzeszowski (1970: 52ff).

A thorough study of errors led to the formulation of the theory of so-called 'approximative systems', i.e. deviant linguistic systems "employed by foreign learners in an attempt to utilize the target language" (Nemser 1969).[2] According to Nemser, the process of foreign language acquisition can be seen as a succession of stages of proficiency, ultimately approaching native-like competence in the target language. In principle, each stage can be described independently, without reference to either the source or the target language.

Without going into details concerning the linguistic status of approximative systems, it is possible to say that each such system can be seen as an intermediate stage on the *horizontal* axis, delimited on one extreme by the source language and on the other extreme by the target language. Whether or not it is possible to claim that a synchronic description of such a system is at all possible is a question that need not be discussed here. All the same it is impossible to refrain from observing that an adequate theory of approximative systems would have to account for their fundamentally dynamic nature, manifested in the perpertual motion (very much resembling linguistic change in general) in the direction of the target language. The theory would have to explain the mechanism and the power underlying this motion.

In an influential paper of 1972 Selinker made an attempt to uncover and describe the nature of this mechanism by isolating a number of *processes* vital in accounting for the form of interlanguage (the term with which Selinker replaces Nemser's 'approximative system'). Thus Selinker distinguished 'language transfer', 'transfer of training', 'strategies of second language learning', 'strategies of second language communication' and 'overgeneralization of TL linguistic material' as factors shaping interlanguage.

Using Selinker's ideas as a starting point for his own interesting speculations, Widdowson (forthcoming) claimed that "all of the processes which Selinker refers to are tactical variations of the same underlying simplification strategy and [...] in general error analysis is a partial account of basic simplifying procedures which lie at the heart of communicative competence".

It appears that the notion of simplification is a crucial one. To that notion, therefore, I now propose to turn attention. According to Widdowson, simplification is a result of an attempt to adjust the language behaviour to the interests of communicative effectiveness. Simplification may, therefore, affect any stage of interlanguage and it may involve "a movement away from the reference norm of the standard language (or even a particular interlanguage) so as to arrive at forms of speaking judged to be dialectally appropriate in certain contexts of use."

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[2] The notion but not the term was first introduced by Corder (1967), who referred to it as 'transitional competence'.

Simplification presupposes the existence of a non-simplified or more complex form of the language. 'Simplified' is a property of language which is by no means restricted to the foreign learner's interlanguages. It also characterizes such types as pidgins and creoles (Valdman 1975; de Camp 1968), 'baby-talk', 'lover's talk', and 'foreigner-talk' (Ferguson 1964) and various types of 'reduced registers' such as 'telegraphese', technical descriptions and the language of instructions (Corder: forthcoming). It is interesting to acknowledge some results of research into the structure of all these 'simplified' codes. It appears that all of them share some obvious structural similarities such as an extremely simple, if any, morphological system, a comparatively rigid word order, a reduced system of pronouns, a small number of grammatical function words, a reduced use of the copula, and the absence of articles (and to a smaller extent of deictic words). According to Valdman (forthcoming) pidgins "are derivationally shallower than other natural languages and reflect more closely cognitively-based deep structure". In view of the overt similarities between all types of 'simplified' codes, Valdman's contention can be extended to cover them all.

In the paper already referred to, Widdowson states that the learner's linguistic behaviour is controlled by a set of rules which need not correspond to the set of rules which he recognizes as constituting the correct norm and to which he can make reference when required. Widdowson calls these rules *expression rules* and *reference rules*, respectively. It is clear that in the former literature both the notion of error and the notion of interlanguage were connected with the concept of competence alone and were thus static in nature. There is no doubt, however, that interlanguage, in contrast with language, is a very unstable and constantly evolving system. The problems that must be stated and accounted for are the following why do interlanguages vary when they do? Under what conditions do they vary? Why is there a discrepancy between what the learner knows and what he does? Answers to these questions may be sought in Widdowson's distinction between expression rules and reference rules. Expression rules are the rules *in presentio* and are actually used to generate a certain linguistic behaviour meeting the communicational needs of the learner. Reference rules are the rules *in absentio*. They constitute the learner's knowledge of the foreign language, i.e. his linguistic competence. In the classroom there is always a correcting teacher, who in all manner of ways, implicitly or explicitly, directly or indirectly imposes references rules upon his learners. But when the learner is left alone to face his communicative needs, he usually finds that his communicative needs exceed his linguistic potential. In economic terms his demands are much higher than the supply placed at his diposal. All the same he is usually able to communicate even if his linguistic competence does not seem to be up to the occasion. Therefore, in the majority of cases communication is achieved at the expense of linguistic orthodoxy.

Widdowson (forthcoming) says that communication in a foreign language involves an adjustment of the learner's language behaviour in the interests of communicative effectiveness. He calls this adjustment 'siplification of use', which "may involve a decrease or increase in complexity of usage."[3] Errors result from the learner's attempts to use reference rules as expression rules. Since, as was said earlier, there is always a deficit of reference rules, learners have to simplify their expression rules in one of many possible ways in their efforts to communicate effectively. Simplification conceived in this way lies at the heart of Selinker's five processes establishing the learner's knowledge (interlanguage) as well as his language behaviour. Therefore, Widdowson is able to conclude optimistically that "a learner's errors are evidence of success not of failure" because "the failure to confirm to given reference rules is the consequence of success in developing expression rules."

Corder (forthcoming) expresses an unorthodox view on the role of simplification in language learning. He suggests that it might be possible to regard 'standard' codes as 'elaborated' forms of 'basic' simple codes such as pidgins, creoles, interlanguages and all types of 'reduced' registers. This proposal assumes the existence of some universal process of elaboration or *complication* involved in all types of language learning. Though universal, the process would of course involve language specific 'complication rules'. The development of a pidgin into a creole would be a case of progressive complication. Another case would be the development of an interlanguae through increasingly complex 'approximative systems' into the target language. All types of 'reduced' registers used in appropriate situations would be viewed as instances of fossilized intermediate approximative systems or institutionalized, stereotyped stages in the process of complication toward the standard version of the language.

Selinker's interlanguage or Nemser's approximative systems, whether

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[3] Widdowson thus explains the apparent contradiction contained in this statement: "How can one talk of simplification which involves linguistic complexity? One can do so, I suggest, because effectiveness of use in a particular communicative situation might well require explicitnes, or a conformity to accepted convention which calls for linguistic elaboration" (Widdowson forthcoming). In other words one often uses linguistically more complicated forms in ignorance of the existing less complicated forms, as in using a definition of a word instead of the word itself, if the word is unknown.

'fossilized' or in the state of flux have been demonstrated to be relatively independent of 'transfer' from the mother tongue (Burt and Dulay 1974b). Moreover, recent studies in error analysis reveal that there exists a common body of errors pointing to some universal learning strategies (Richards 1974). Transfer phenomena seem to be relatively less numerous and significant than was believed before.

Does it all suggest a further regress of relevance of CA conducted for pedagogical purposes? If the prediction of negative transfer (interference) and other horizontal phenomena across languages is to be considered as the main object of CA, then in view of the recent revelations described above the answer is perhaps "yes". Horizontally organized CA's are certainly limited to predicting and explaining phenomena which seem to occupy but a small area in the linguistic behaviour of foreign language learners.[4] Some very crucial and significant processes such as simplification (complication) and fossilization connected with errors escape systematic treatment in terms of horizontally organized CA's. It is likewise obvious that a large number of errors cannot be explained by the interlanguage theory any more than they can be explained by the transfer theory. Of Selinker's five types of processes responsible for the formation of interlanguage, only three are connected with transfer either from the target language (overgeneralization, analogy) or from the source language (interlinguistic interference). It is worth noting that 'transfer of training', if it results in errors, may be looked at as a special case of wrong generalizations from the target language, since drills and exercises providing the basis for 'transfer of training' are nothing else than didactic texts written in the target language. Ideally, therefore, through careful preparation and manipulation of didactic texts, overgeneralizations of this sort can be eliminated and this type of transfer disregarded since, unlike other types oft ransfer, it is relatively easy to control.

The remaining two types of processes responsible for the formation of interlanguage, i.e. 'strategy of second language learning' and 'strategies of communication' cannot be related to transfer phenomena.[5] Of the five types of processes the last two are directly responsible for the phenomenon of simplification (complication) in the sense discussed above. The mutual relations between the source language, the target language, the interlanguage, and the processes which are involved in the formation of interlanguage can now be visualized in the form of the following diagram:

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[4] See, for example, a study of Spanish-English bilingualism by Lance (1969:124), who arrives at the following conclusion: "One of the most important conclusions this writer draws from the research in this project is that interference from Spanish is not a major factor in the way bilinguals construct sentences and use the language".

[5] It remains to be investigated to what extent the particular factors distinguished by Selinker influence each other. For example, it could be so that 'strategies of TL learning' are somehow determined or modified by 'strategies of communication' or by 'transfer from SL'. These mutual relations may depend on a specific situation in which interlanguage is used. In the classroom 'transfer of training from TL' and 'strategies of TL learning' may override other factors. In a live communicative situation, however, 'strategies of communication' probably dominate other factors. It would seem that the five

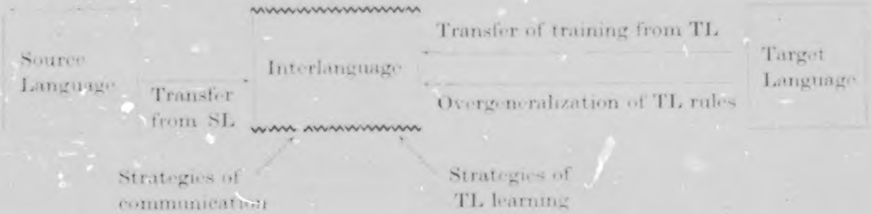
Source Language
Transfer from SL
Interlanguage
Transfer of training from TL
Overgeneralization of TL rules
Target Language
Strategies of communication
Strategies of TL learning

Fig. 1

The diagram shows that transfer from the source language, transfer of training from the target language and overgeneralization from the target language are horizontal processes which influence the form of interlanguage. The other two processes cannot be handled in terms of any horizontal description since they do not involve any transfer either from the source or from the target language. In the remainder of this paper I am going to suggest a way of describing the phenomenon of complication which is inseparably connected with strategies of second language learning and with strategies of communication within the framework of contrastive generative grammar (CGG) (Krzeszowski 1974).

As was observed earlier, following Corder's argumentation, the development of the learner's language into the target language involves some universal process of complication according to language specific complication rules. The process of complication does not take place along the horizontal dimension but rather along the 'vertical' dimension as the learner moves from some basic language through successive stages of complication toward the target language. This is certainly true of a baby acquiring his native tongue. I wish to hypothesise that the same 'vertical' dimension of movement is involved in the process of second language learning, even if this process is distorted by other processes including those that can be described horizontally.

The model of second language learning must include the two types of rules described by Widdowson, i.e. reference rules and expression rules. It must also account for the mutual traffic between these two types of rules.

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factors distinguished by Selinker arrange themselves in a hierarchical order depending on a specific extra-linguistic situation in which interlanguage is used.

The model must also account for formal similarities between learners' interlanguages regardless of their native language as well as for the fact that this resemblance tends to be stronger in the case of the most 'basic' forms of interlanguage (cf. Dulay and Burt 1974a).

All these phenomena can be treated only in terms of a theory in which a common conceptual base underlies all forms of more elaborated realizations of the language, with an increasing amount of interlinguistic differences at less 'basic' levels of realizations in various languages. A foreign language learner, in his attempt to compensate for the deficit in reference rules available to him in the target language, can always resort to the process of *lexicalization* of forms which are less elaborate by being closer to the 'basic' forms. The resulting sentences are deviant. They do not, however, necessarily show symptoms of transfer from the source language, but rather they reflect certain universal properties of underlying representations, simpler in form than the fully elaborated constructions of the target language.

The organization of contrastive grammar suggested by the present author in a number of papers seems to be well fitted for providing a fairly explicit account of the process of complication associated with second language learning. The 'vertically' organized contrastive grammar is founded upon a universal semantic or conceptual input consisting of configurations of elementary, primitive notions such as Agent, Patient and all sorts of specifications of location in time and space. Such universally structured configurations are assumed to underlie equivalent constructions and sentences across languages. Language specific categorial rules assign major grammatical categories such as 'sentence', 'noun', 'verb', 'adjective' to particular portions of input configurations. The resulting categorized structures are mapped by syntactic transformations onto subsurface representations into which lexical items are inserted by means of rules called lexicalizations. The resulting structures serve as inputs to rules called 'cosmetic' transformations. Syntactic transformations account for surface structures of sentence, i.e. for hierarchical arrangements of morphemes, constituents of phrases and of phrases, constituents of sentences and of sentences, constituents of sequences.[6] Briefly speaking, syntactic transformations determine the syntactical structure of sentences and their sequences. In addition, they also effect minor lexicalizations by inserting function words into derived constructions. 'Cosmetic' or post-lexical transformations account for linear arrangements of morphemes and word boundaries as well as such phenomena as agreement, concord and government expressed through morphological signals. Cosmetic transformations determine the morphological structure of words.

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[6] For the notion of sequence as a linguistic unit consisting of sentences see Krzeszowski (1974 : 71ff).

A grammar organized in this manner involves two kinds of lexicalizations: minor and major. Minor lexicalizations insert function words and belong to syntactic transformations. Major lexicalizations insert content words. In fully elaborated codes all major lexicalizations take place after all syntactic transformations but before cosmetic transformations. In various types of 'simplified' codes, notably also in learners' interlanguages, major lexicalizations may occur at earlier stages of derivation. In extreme cases lexicalizations occur at the level of semantic representations. In such cases cosmetic transformations are either completely ingored or apply only to a limited extent according to poorly investigated rules of complication.[7]

Since major lexicalizations as it were 'fossilize' the syntactic structure of constructions, the degree of syntactic complication of a construction actually uttered by the learner is directly dependent upon the stage of derivation at which the learner lexicalizes his construction. Early lexicalizations result in the syntactically simplest constructions characterized by the absence of function words (inserted by syntactic transformations which in such cases have no chance to apply). Within this framework, complication can be defined as the gradual shift of the place at which major lexicalizations occur from the deepest level of representation, i.e. the semantic level, to the level of shallow structure, i.e. the level which constitutes input to cosmetic transformations and where major lexicalizations occur in fully elaborated codes.

One of the observations which can be made on the basis of the theory of contrastive generative grammar is that each language has its specific *pattern of complication* which consists of all possible derivations of all types of constructions derived from semantic representations through syntactic transformations. Since the initial postulate of CGG states that equivalent sentences across languages have identical semantic inputs, equivalent sentences across languages have language specific *complication routes* according for the fact that such sentences exhibit structural and lexical differences (Krzeszowski 1974:12). A foreign learner may either lexicalize prematurely, thus producing 'simplified' or 'reduced' constructions which in our terms would merely be constructions that have not been elaborated (complicated) enough, or he may pursue a complication route characteristic of his native language or of some other language which is not L_2. In all these case he will be producing deviant utterances. In the case of premature lexicalizations the resulting 'errors' may be universal in nature. If, however, the learner chooses a complication route of L_1 or of some other language different from the target language, the resulting errors may be characteristic of a restricted group of languages or in certain extreme cases (if the complication route is pursued down to its very end) of one particular language. Properly constructed CGG for L_1, L_2 and other relevant languages should in principle provide explanation for both kinds of errors. If one considers the growing body of knowledge concerning all types of 'reduced' codes, one cannot fail to notice that universal errors can be predicted by CGG with a fair degree of accuracy. Among them are: omission of articles, copulas, tense and aspect markers and of inflectional suffixes as well as a reduction in the vocabulary of function words such as conjunctions and prepositions. These features were originally found to characterize the so-called foreigner-talk as described by Ferguson (1975). The same, however, is also found to be true of pidgins (Valdman 1975) and other 'reduced' codes such as baby-talk ,'telegraphese', 'instructions' (Corder forthcoming) and the language of Kehaar, a character in 'Watership Down', a story for children (Corder 1975).

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[7] Imitation seems to be an underestimated though very important factor determining the acquisition of 'cosmetic' rules. 'Cosmetic' transformations account for the overt grammatical phenomena such as agreement, concord, government and word boundaries. This area of grammar is probably acquired through the poorly investigated and underestimated process of imitation and analogy, which in spite of Chomsky's claim to the contrary necessarily do play their part in any language acquisition process (Cf. Chomsky 1966 : 12ff).

Errors resulting from substituting complication routes of L_1 for complication routes of L_2 are language specific and can be predicted by CGG on the basis of comparisons of particular languages enumerated by CGG. Such errors may involve word order and faulty uses of various grammatical systems and rules.

Other deviations from L_2 those that cannot be recognized either as universal errors or as errors resulting from substituting a complication route of L_1 for a complication route of L_2, can be viewed as errors of the second order. If one agrees to interpret the foreign learner's 'fossilized' competence as a realization of his learning strategy involving a combination of premature lexicalizations and of complication routes characteristic of some language(s) other than L_2, all the remaining errors can be recognized not so much as deviations from L_2 but as deviations from the 'fossilized' competence. As such, these errors are no different in nature from the native speaker's deviations from the norms of his own language. Errors of this type are likely to turn out to be mere slips, caused by an assortment of factors of extralinguistic character. They may require no special therapeutic measures, at least no measures which can be derived from a strictly linguistic theory.

Summing up, let us state again that 'vertically' organized contrastive grammar, deriving equivalent sentences across languages from common semantic representations provides a linguistic framework to deal with the phenomena of simplification and complication. The traditional concepts of negative and positive transfer can be augmented by the more refined concepts of premature lexicalizations and the substitution of complication routes of L_1 for complication routes of L_2. The two types of processes can be demonstrated to be responsible for a larger body of errors, both universal and language specific than it has ever been possible to demonstrate by horizontally organized contrastive analyses.

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ON THE FEASIBILITY OF PEDAGOGICAL CONTRASTIVE SOCIOLINGUISTICS

KAROL JANICKI

Adam Mickiewicz University, Poznań

The following considerations originate from the recent upsurge of interest in pedagogical implications of sociolinguistic research. Although the number and quality of the articles on the subject to date are by no means impressive, the general lack of cohesion in the line of research undertaken can be detected.

The underlying claim of the present paper is that no systematic and effective teaching of sociolinguistic facts can be undertaken before a sound methodological basis is worked out.

Generally, the present article is an attempt at pointing out ways of systematic application of sociolinguistic data to the foreign language learning-teaching process. In particular, our aim here is to define the framework within which sociolinguistic contrastive analyses for pedagogical purposes could evolve.

Such a framework would imply the existence of or need for the isolation of pedagogical sociolinguistics from sociolinguistics proper.

The term *pedagogical* can refer to both first and foreign language phenomena (Hartmann and Stork 1972:167). We suggest, however, that in the present article the term *pedagogical* apply only to the learning and teaching of a foreign language.

The term *pedagogical sociolinguistics* (PS) has been proposed, obviously, as an analog to the already widely used pedagogical linguistics. However, extensive modifications should be made as to the range of concerns possibly dictated by the analogy. We suggest that objective of pedagogical sociolinguistics (at least at the present stage of research in the field) should be the circumscribing of the sociolinguistics areas, topics, issues, and phenomena which will be foci of the foreign language material compiler.

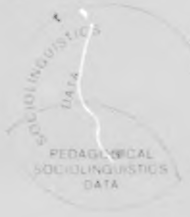
It follows that some sociolinguistic facts which may be of utmost significance to sociolinguistics proper are not relevant to the preparation of foreign language materials for teaching purposes.

We will now try to exemplify both pedagogically-relevant and pedagogically irrelevant sociolinguistic facts. For example, the origin of Black English Vernacular (Trudgill 1974) is by no means pedagogically relevant, although it remains a central problem of present-day American sociolinguistics. The methods of isolating contextual styles (Labov 1972) will not be of interest to pedagogical sociolinguistics although the styles isolated and their linguistic correlates obviously will. Deep categories underlying the use of pronous (Brown and Gilman 1972) will have no bearing to foreign language teaching but the surface pronoun system in a particular language and its application will be relevant. Likewise, rules of address, that can be explicitly formulated, (Ervin-Tripp 1973) and those pertinent to other forms of social interaction will be valid.

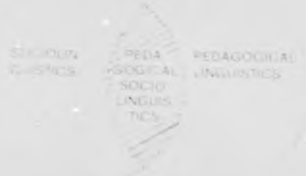
Thus, PS will aim at selecting only those sociolinguistic facts that can potentially contribute to the native-like mastery of the foreign language. Moreover, this skill seems to be much facilitated when sociolinguistic data is presented to both the teacher and the student in a systematic and explicit way. This, in turn, will be plausible when *sociolinguistic grammars* are constructed.

The estrangement of PS from sociolinguistics proper, as defined above, may be taken to mean the possible emergence of a new discipline. For the time being, however, the term does not claim such a status; it has been tentatively used as a convenient tool for the handling of sociolinguistic data relevant to foreign language instruction.

The relation of PS data to the entirety of sociolinguistic data might be graphically illustrated as follows:



The relation of sociolinguistics to PS, however, will be entirely different since PS is not meant to be a subdiscipline of sociolinguistics but rather an independent domain which gets information from sociolinguistics and applies it in the foreign language learning-teaching process. Graphically the relation might be presented as follows:



The shaded area, which circumscribes the limits of PS, refers to those sociolinguistic facts which are relevant to foreign language teaching (FLT), and to those aspects of pedagogical linguistics which turn out to be relevant to the teaching of the mentioned sociolinguistic facts.

Having defined the term *pedagogical sociolinguistics*, we now turn to the discussion of *pedagogical contrastive sociolinguistics* (PCS). If it is assumed that any study of L_2 involving concern about differences and similarities between L_2 and L_1 is of a contrastive nature, then PCS seems to be a corollary of the existence of PS. This will be true unless we posit the operation of PS with no references to L_1 sociolinguistic structure. In view of the present advances in language didactics such a procedure in turn, would have to ignore, among other things, the inter-language sociolinguistic interference which definitely exists but which has not yet been systematically explored.

In my opinion, which is based to a large extent on impressionistic judgments a study of sociolinguistic interference (both inter- and intra-) would most probably reveal a number of interference categories possibly parallel to those isolated by Richards (1974).[1]

At this point we might tentatively say that PCS is possible, but still a great many questions remain to be raised before the potential student of PCS knows what his field actually is, and what are some of the tasks he is confronted with. If contrastive analysis is to be taken to mean systematic juxtaposition of equivalent and different structures, elaboration on the notions mentioned so far becomes necessary.

As has already been mentioned one of the goals of PS is the isolation of sociolinguistic data relevant to its (PS's) operation. Another target of PS will, however, be systematic application of this sociolinguistic data in the FL learning-teaching process. Such a procedure will be the easiest to pursue once sociolinguistic grammars have been constructed.

A sociolinguistic grammar might be arrived at by means of matching two grammar systems:

1. a linguistic grammar

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[1] Among other categories Richards lists overgeneralization, markers of transitional competence, errors due to strategies of communication and assimilation, etc.

2. a grammar of social interaction (GSI).

A grammar of social interaction would be a finite set of rules on the basis of which an infinite number of social behaviours would be generated, e.g., the grammar of social interaction for language community X might include a rule stating that when two people see each other for the first time during the day they greet each other (it is a categorical rule for Polish and English, and possibly a universal) one. A lower level variable rule would, in turn, prescribe either a verbal realization of the greeting, a non-verbal one, or a combination of the two (in each of the cases a number of options being possible). Grimshaw (1973:104) corroborates the validity of 2.: "I... want to underline for you the importance of at least acknowledging the existence of a complex set of rules in a grammar of social interaction and the further reality that while there may be a grammar of social interaction there are also grammars (plural) of social interaction for different groups".

Recapitulating, in order for PCS to exist the following line of reasoning has to be accepted:

1. Alongside a linguistic grammar, a grammar of social interaction has to be constructed for each language

2. These two grammars have to be combined to yield a sociolinguistic grammar of, say, language X

3. After individual sociolinguistic grammars for languages X and Y have been formulated, *contrastive sociolinguistics* (CS) singles out equivalent and different relationships

4. PS comes in and utilizes grammatical[2] information for FLT purposes

5. If PS uses data collected by CS then it naturally becomes PCS.

We now turn to the feasibility of Steps 1 through 5. It seems that steps 1 and 2 involve a methodological alternative with regard to the process of combining linguistic grammars and those of social interaction. If we accept the view that legitimate sociolinguistic grammars can be constructed by means of matching linguistic grammars with those pertaining to the social structure, then in a number of languages (those for which relatively complete linguistic grammars have been written) our task is reduced to the construction of grammars of social interaction and then combining the two. Such an approach brings us to define the underlying categories and surface structure relationships of a potential GSI of a language.

Even in a highly heterogeneous society whose overall pattern of language use is extensively diversified regularities can be arrived at. "One may not need to know all the contexts and categories of a community to discern the essentials of its patterns in these regards, but one must know the dimensions on which contexts and categories contrast" (Hymes 1974:158). Countless situations "in which language activity takes place can be grouped into situations types to which correspond the various uses of language" (Halliday et al 1964:95).

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[2] Grammatical here means "pertaining to sociolinguistic grammar".

We follow Grimshaw in assuming that a GSI endemic to an individual society would be derived from an underlying universal grammar of social interaction. "I have become increasingly convinced that the varieties of behavior described by scholars who studied questioning, or teaching or learning in different societies may obscure — in their richness — the probable existence of a set of underlying principles and relations which hold for all such behavior — however different surface manifestations may be... I suspect, in short, that there are interactional universals for all societies and interactional rules for individual societies in a fairly precise analog to linguists' rules for languages and rules for language" (Grimshaw 1973:107).

The writer of a GSI for a particular social group would thus have to take into account such relationships (which we assume to be universals) as subordination-superordination; possibly universal dimensions such as social distance; criteria for categorizing settings, topics, personnel; and content[3] of actual interaction, i.e., social behavior commonly labeled as deference, compliance, effrontery, acquiescence, etc.

Following Simmel's (1950) model, a sociolinguistic grammar within the approach adumbrated above would involve a three level analysis:

1. Identifying the forms which can be viewed as abstract, e. g. the accomodative relationship of subordination-superordination
2. Matching, in a particular language, the occurring content categories, e. g. compliance, deference, respect demand, etc., with the underlying abstract labels
3. Assigning the occurring linguistic forms to the observed social behavior, i.e. identified content categories.

Whatever the outcome of such a behaviour in a sociolinguistic description, the approach outlined above toward the development of a general method or theory in sociolinguistics is found by some scholars to be erroneous since it does not imply natural integration, from the very beginning, of sociological and linguistic facts.

The alternative view stresses that "there must develop a partially independent body of method and theory — what might be termed — ... an integrated theory of sociolinguistic description" (Hymes 1974:74) where no postdescriptive matching but outright integration would be attempted. The integrated theory of sociolinguistic description would account for the "creative language use [which] is often not a matter of a novel sentence, or a novel context either, but a novel relation. Sentences and context may be familiar, the use of one in the other may be what is new" (Hymes 1974:156).

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[3] Simmel (1950) differentiates between the forms which interaction takes and the content of an interaction. Grimshaw (1973 : 108) refers to Simmel's model: "The forms, can be discussed and understood in the abstract, without regard to the personalities or other characteristics of the particular incumbents in the particular roles involved. Simmel identified four such forms: competition, conflict, accomodation, and assimilation". Content, in turn, refers to the actual social behaviour.

Provided sociolinguistic grammars have been constructed for any two languages (whatever the underlying methodology) CS can commence to function. Having selected the sociolinguistic information relevant to FLT (cf. p. 18), PS, in turn, introduces the collected data into the learning-teaching process.

Before PCS is clearly defined in terms of its immediate goals we have to refer to CS which has not emerged yet, and which we need in the form of a systematic analysis of different sociolinguistic systems. As Higa (1971) points out, information on the use of relational utterances[4] is indispensable for successful FLT. Since gross differences in the use of these utterances can be detected among languages, for FLT the juxtaposition of the two systems pertaining to L_1 and L_2 is found to be of paramount importance. With regard to relational utterances Higa says: "Contrastive sociolinguistic studies can determine how universal or culture-specific these factors of relational utterances are that are found in one language" (Higa 1971:216).

The question that has to be asked at this point is whether the scope of CS would go beyond the sociolinguistic facts that are of interest to PS. If we define CS's goal as discovery and explicit elicitation of differences and similarities between two sociolinguistic grammars, then the answer to the above question would be negative. If, however, CS extends its concerns to exogrammatical (cf. note 2) phenomena the answer would be positive. In other words, if CS is concerned with the entirety of sociolinguistic data, then, a large part of CS data will be irrelevant to PS, and by extension, to PCS.

If the former concept of CS is accepted then PCS can come into being only after CS juxtaposes two sociolinguistic systems (with the descriptive limits mentioned) and points to entities of equivalence or those exhibiting differences.

Thus we are getting to the final definition of PCS in terms of its objectives. PCS is meant to be an approach within PS which would aim at effective utilization in the FLT process of the systematically presented data included in the field of CS (the scope of CS's concern not going beyond sociolinguistic grammars). The existence of CS will be possible if the conditions pertaining to the ordering of data collection and rule formulation, listed above, are met.

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[4] Higa differentiates between *factual statements* and *relational utterances*. The former are those by means of which the speaker does not particularly attempt to relate himself to any other person, e. g., *The sun rises in the east; The lion is a mammal*, etc. The latter "are utterances which assume that there is a listener and the speaker is relating himself to the listener" (Higa 1971: 211), e. g., *Good morning, hi, so long*, etc.

Throughout this paper we have been referring to linguistic, socio-interactional, sociolinguistic, and contrastive sociolinguistic grammars. Although the implications may have been those of a necessity of first completing the grammatical[5] description at a particular level of operation, and only later passing on to the next level, the author is fully aware of the present futility of such endeavor. How could we possibly think of complete sociolinguistic grammars if linguistic grammars are incomplete let alone grammars of social interaction, which do not exist at all?

Does it mean, then, that the field of central interest to us — PCS, cannot come into being untill those complete source grammars have been constructed? Obviously not.

As is known, contrastive studies have been taken up although no complete grammatical information on the languages contrasted has been provided. Likewise PCS can start operating on the fragmentary sociolinguistic data whose collection is being encouraged or which, in some isolated cases, has already been gathered.

A note must be made of the relationship of PCS to *language didactics*, a label assigned to the general theory of language teaching. Unlike pedagogical linguistics, which does not concern itself with the exolinguistic aspects of human communication but only implements theoretical linguistic descriptions in the FLT process, language didactics collects linguistic, psycholinguistic, sociolinguistic and pedagogical information, and incorporates all of these kinds of information in its working procedures.

In this way, it can be seen that PCS along with pedagogical psycholinguistics (?), psychology of learning, and other disciplines relevant to FLT are complementary to one another and thus subordinate to the more general and allinclusive language didactics.

Being aware of the hindrances and difficulties that PCS faces we should not get discouraged, however. On the contrary, we should follow Bickerton (1973:18) who, while being cognizant of the difficulties underlying the construction of polylectal grammars, says: "One could, like some linguists..., spend forever discussing where and how to start, it seems more useful simply to get started".

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[5] Here *grammatical* is an overall term which may pertain to linguistic, socio-interactional, or contrastive sociolinguistic grammar.

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THE LEXICON AND CONTRASTIVE LANGUAGE STUDIES

MIROSŁAW NOWAKOWSKI

Adam Mickiewicz University, Poznań

0.1. Polish-English lexical contrastive studies seem to be lagging far behind contrastive analyses of all other levels of the two languages. Our reader, however, should not be mistaken to take the statement as suggesting that there are no bilingual English-Polish dictionaries as good (or may be as bad) and as comprehensive as any standard comprehensive bilingual dictionary may be. Furthermore, it does not seem that what is badly needed is a new more comprehensive contrastive dictionary (even if someone was ready to define the vague concept *contrastive dictionary*).

To make up for the delay the Project needs a number of articles, longer papers, monographs, and vocabulary studies which, using a unified set of criteria and a unified terminology, will define systematically and exhaustively lexical differences and similarities of the two languages. Many of those studies will be of theoretical importance but quite a number of them could, with certain reservations, be termed "dictionaries". As envisioned by the present author these "dictionaries" will differ from what is usually (but by no means always) meant by the term in their being primarily "customer-oriented" (the teacher, learner and translator — being the most important adressees). This, in turn, should have a marked influence upon the format of the "dictionary" (e. g. it would not have to be alphabetical, it need not be presented in the form of an ordered list, usually more context than in standard dictionaries will be introduced, illustrations could be used freely). Similarly, no independent requirements of comprehensiveness could be postulated for our "dictionaries" (i. e. number of details or the "delicacy" and length of definitions in the dictionary will depend on the application).

It is hoped that with theoretical assumptions presented in this article, the postulate that replacing (or rather assisting) the bilingual dictionary with a number of "dictionaries" will be found both principled and much less trivial than it seems to be at this point.

0.1.1. It will be claimed here that, inherent difficulties of the so-called lexical semantic studies aside (cf. Lyons 1968: ch's 9, 10), it is the lack of an adequate theory of lexical contrasts[1] that has to be dealt with first if any progress is to be made in the area. Furthermore, since it is the strongest belief of the author that the only possible type of lexical studies must of its very nature be contrastive (i. e. either interlinguistically or intralinguistically contrastive; cf. Bańczerowski 1974: 11 - 12), then there is no use waiting for general linguists to come out with an adequate theory of lexical studies. In other words, we assume that as far as the lexicon is concerned, contrasting linguists should be prepared to give at least as much as they take from general lexical theories (if not more).

For reasons given in 0.1. the aim of the present paper is more practical than theoretical. Its author is primarily concerned with:

a. limiting the scope of contrastive lexical studies,
b. pointing to certain areas of contrasts which, being more interesting from either the pedagogical or theoretical standpoint, could or should be investigated first; and
c. suggesting certain methodological principles for contrastive analysis of that type.

1.1. By lexical contrastive studies we mean here the type of studies in which **LEXICONS** of two (or more) languages, or two and more varieties of one language (i.e. subsets of the L-lexicon) are systematically compared and lexical differences and similarities are systematically and exhaustively characterized.

The purpose of such investigation may be theoretical. Thus, for contrastive language studies it is necessary to define such notions as: *similar//different lexical items*, *systematic* vs. *accidental lexical gaps*, or the notion of lexically defined cultural overlap. For general language theory, investigation of that type would ultimately aim at the definition of the *possible lexical item* and/or attainable concepts (system of, the structure of the system).

Alternatively, the application of contrastive lexical analysis could be pedagogical. Studies of that type would be used in preparation of teaching material (handbooks and exercises), so that foreign language learners get acquainted with L_2-lexical items placed within particular semantic fields equivalent to L_1-fields with marked L_2 differences. Similarly, the second standard pedagogical application of contrastive studies, namely, error-prediction and error analysis, would profit from systematic description of the areas of lexical gaps, areas of overlap or false cognates.[2]

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[1] Rather than any of other putative reasons usually given to account for similar delays, e. g.:

a. all existing mono- and bi-lingual dictionaries are lacking in 'current idiom", are circular, inconsistent, and/or lacking in all other possible ways: faulty frequency assignments, not comprehensive enough or too bulky and too detailed, based on inadequate language theories, etc.,

b. lack of a sufficient number of qualified investigators (i.e. lexicographers).

Obviously, one could blame the state of the art (general linguistics) for what has not been done in contrastive studies, but cf. § 0.1.1.

There may be still another application of contrastive lexical studies. It is doubtless that studies of lexicons of two languages will be found useful to those lexicographers and linguists who work on the **DICTIONARY** of either of the compared languages or on a bilingual dictionary of the known type (it may be worth stressing here that both dictionaries-as-handbooks, **AND** dictionaries-as-components of the grammar-theory are being referred to at this point; cf. below).

By the **LEXICON** of a language we mean a set, possibly an infinite set, of **WEINREICH LEXICAL ITEMS** organized into interrelated "vertical" and "horizontal" nets of relationships. Weinreich lexical item (henceforth: W-lexical item) is an abstract unit in which one meaning is assigned to one form.[3] "Vertical" lexical relations are relations between W-lexical items in terms of hyponymy and hyperonymy (see Lyons 1968:453ff.). "Horizontal" relations are those of paraphrase, synonymy, oppositness, reference (coreference), presupposition,[4] and metaphorization[4] (cf. Lyons 1968: ch. s. 9 and 10).

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[2] For definitions of terms and an example of such analysis see: *The Romanian-English contrastive analysis project; reports and studies.* (1974: 27 - 30, and especially 127 - 144).

[3] On Weinreich lexical item see: Weinreich (1966); McCawley (1968). Both Weinreich and McCawley, however, treat the term as pre-theoretical and intuitionally graspable. Thus, a number of questions needs further elaboration within a lexical theory.

To begin with, the reader may equate "W-lexical items" with Lyons' "lexemes" stipulated by definition to be unambiguous. As its "form" — one may take morphonological and categorial features. Its "meaning" may be either defined by the nets in which a given item appears with other items (thus all items are mutually co-defining their meanings) or, though this is a much weaker position, the meaning of each W-lexical item may be defined in terms of sememes arrived at in the process of componential analysis (cf. Lyons 1968: ch. 10). The second position is weaker since it forces one to state explicitely the relation of 'words' (units) as W-lexical items to equally unambiguous 'words' (units) as sememes, e. g. sibling: **SIBLING**, male: **MALE**, young: **YOUNG**, etc. Also, relations among W-lexical items within a net can hardly be stated in terms of sememes unless the notion of semantic field is redefined (so as to at least make it polycategorial and metaphor-sensitive; on what is meant by semantic fields today see Hartmann (1973)).

[4] The terms 'metaphorization' and 'presupposition' seem to be amply illustrated in the text, though, at the moment the author is unable to formulate a formalized and explicit definitions of the two. Metaphors have traditionally been investigated by lexico-semanticists (cf. Ullman (1962), Zvegintsev (1957)). A need for extending the notion of presupposition into lexical analysis was first suggested by Fillmore (1971). We would

It seems highly plausible to assume that the relationships between W-lexical items is identical to logical and/or semanto-syntactic relations as they are being currently discussed in modern linguistic theories (cf. for instance the generative-interpretive semantics controversies). Thus, our list of relations may be considered open-ended.

1.1.1. The distinction (implied in §1.1. above) between the **LEXICON** of a language and the **DICTIONARY** as a component of the theory of this language[5] will be claimed here to be vital if any progress in lexical (lexico-semantic) studies is to be made. The distinction should also be recognized by theoretical linguists.

LEXICONS as codified structures of meanings in human languages in additions to linguistic rules that do govern their structure (cf. § 1.1.), seem to be subject to a number of rules and restrictions which, if stated explicitly, would be *uniquely* postulated for that particular (sub-) component alone. To give some examples:

a. It has been found impossible to define formally in either morphological or semanto-syntactic terms a form (=a unit) which would cover (=be superordinate to) all the different structures that should be investigated and listed in the lexicon. (cf. Lyons 1968:§ 5. 3.§ 5.4 on words vs. morphemes; see also Lees (1960) on morpheme vs. compound vs. phrase).

In other words, the linguist who includes the lexicon as a subcomponent of his theory could be expected to give a formal definition of a superterm that would cover what is traditionally known as "words", idioms, compounds, numerous "set phrases" (with various degree of "setness" of the type: Ngen.s. + N, Adj. + N, N + Prep + N, N (+case + N), as well as certain ready made utterances and definitions (of the genus proximum-differentia specifica type).

The group of the so called "transformationalists" (in the current "lexicalists" vs. "transformationalists" controversy) seems to be far better off in this respect since their use of the notion "underlying S" comes closest to the needed superterm.

To be workable in contrastive language studies, however, the superterm would have to additionally account for: intralinguistic paraphrase relations (e. g. E. words = E. phrases) and for certain interlinguistic equivalence relations of (at least) the following types: morpheme :: word: e.g.: *wiatrAK* : : *wind-*

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like to extend Fillmorian presupposition here, so as to include certain relations traditionally referred to as 'collocability' and 'compatibility' (cf. Lyons 1968:440). Both metaphorization and presupposition as they are understood here have been dealt with in Nowakowski (1976). As far as examples are concerned, the previous article is slightly more 'generous' than the present one. We would not like to support, however, all the theoretical assumptions made there, or in other words, the present article seems to me less wrong than the other one.

[5] Dictionary as a handbook is also included here.

MILL, *chimneySWEEP* :: *kominiARZ*, *PICKpocket* : *kieszonkOWIEC*; or a "category split" as in: *tap* :: *stukać lekko* (V :: V+Adv), *give up* :: *rzucić* (V :: V+Prt), *lock* :: *zamknąć kluczem/na klucz* (V :: V+N).[6]

b. Furthermore, the lexicon would be the only component of grammar that would have to be made **SIMULTANEOUSLY** sensitive to:

1. dialectal values (geographical space)
2. profession value (jargons of professional groups)
3. fashion-temporal values (e. g. "current idiom" vs. the "prohibition time idiom")
4. certain other social values ("class dialects")
5. time value (±archaic or obsolete)
6. "esthetic" values
7. emotive values (vs. "intellectual, neutral or descriptive words")
8. "style" values (i.e. intimacy or familiarity judgements)
9. frequency values

(NOTE: only certain of those markings would have any relevance for the morphonological component)

c. Consequently, no other component of grammar would be so sensitive with respect to what is being modelled (i.e. predicted and explained) within our theory as the lexicon.

Thus, from the point of view of language acquisition, lexical problems are either trivial or accidetnal (unpredictable), or else, they should become the subject matter of developmental psychology and sociolinguistics.

If, on the other hand, it is the ideal native speaker's knowledge of his language that we are trying to model primarily, then the lexicon is either equated with the memorized (or memorizable) morphological structures of his language and rules for combining well-formed structures of this type (and thus — as in Halle (1973) — lexical studies are trivialized being reduced to certain aspects of word-formational analysis only), or else, the investigator is being accused of not doing linguistics properly (as was Chomsky in Weinreich et al. (1968) since the homogeneous speech society assumption (Chomsky 1965: 3) presents him with a serious difficulty of how to explain where the native speaker's value judgements (cf. b above) come from. And to treat those judgements as factors of performance would be most inadvisable.

The notion of the heterogeneous language theory has been rejected by the present author elsewhere (Nowakowski 1975) but the notion of the native speaker who knows all the lexical items of his language perfectly seems equally implausible.[7] We would like to suggest that by ascribing to the ideal native speaker the perfect knowledge of the grammar of his homogeneous community nothing else is claimed than that he is able to:

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[6] For paraphrase relations see Lipińska (1974), Rozwadowski (1904).

[7] Namely, in Nowakowski (1975).
As for the native speaker's knowledge of all W-lexical items of his language one might,

a. unambiguously accept or reject a certain sound sequence or sequences as morphonologically well-formed or ill-formed English strings; if he accepts the string and is given ("recognizes", has the category given by the grammar) its categorial (=syntactic) value, he is able to fit it into a lexical net or nets (i.e. "to ascribe meaning to it");

b. ascribe to the morphonological string of elements the ±foreign marking on the basis of the morphonological rules of his language (although an alternative solution, namely, to ascribe "strangeness values" as the tenth value of our 1.1.1. b-list seems plausible as well).

However paradoxically it may sound, we would like to claim here that the assumption (formulated below) concerning a principled lack of knowledge of all lexical items of one's own language is theoretically more interesting than the opposite claim which condemns human languages to infinite (mostly unexplainable) homophony (cf. also note 7).

The assumption is: for a native speaker of an L it is true that at any moment he does not know all Weinreich lexical items of this L (though he does know both the morphonological and semanto-syntactic rules of his L — and thus possible lexical relationships and "possible nets" — perfectly). This "lack" is a matter of principle, it "belongs" to native speaker's competence and has nothing to do with memory restrictions, other performance factors or the "active use-vs.-passive recognition" dychotomy.

1.1.2. It seems that the distinction between dictionaries and lexicons has been implicitly accepted in language pedagogy for a number of years[8]. Teach-

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in addition to other arguments presented in the article, put forth a following "naive" argument:

In an ideal lexicon (cf. e. g. Krzeszowski (1974:160 - 178) in which all Katz-like, i. e. polysemous, lexical items are perfectly specified with respect to their presuppositions, implications, entailment, and all other syntacto-semantic features, there would have to be a certain degree of " overspecification" which could be looked upon as a restriction on native speaker's creativity (i. e. his syntactic creativity). In other words, why does not the ideal native speaker who knows all the items of his language, attach always the most appropriate item, the best specified "word" well-defined by either the selectional restriction rules and rules of context (and -or consituation — to include the possible influence of the conversational postulates). It is rather the give-and-take or the "flow" relation between the semantosyntax and the lexicon that seems to be responsible for the creativity (if the notion is looked upon from the semantic point of view).

Thus, semanto-syntax and lexicon could be thought of as being connected by a feedback mechanism of some sort. This hypothesis would account for the fact that the number of W-lexical items is infinite. It could also explain why Chomsky's assumption about creativity, which was so far demonstrated to operate in the domain of syntax, has been understood by most readers of TG theories to means "semantically motivated creativity".

ers have always warned beginners in foreign language studies that to use a bilingual or a pedagogically oriented monolingual dictionary effectively, one has to have a good grasp of language. There have always been known bilingual speakers, i.e. those who "think in foreign languages", or who "have the language feel" unable to talk about, for instance, plants and trees or animals. It might be assumed that to have a good grasp of a language, to have language feel means (as far as the lexicon is concerned) the knowledge of nets and possible relationships within a single net and across the nets (in other words, it means the ability to make both good recognition guesses and production guesses; the ability to make the most out of the limited number of the morphonological dictionary items at the bilingual's disposal).

The importance of the distinction for contrastive lexical analysis has been recognized by Di Pietro (1971:121) who closes his contrastive analysis of Eng. *meat/flesh* and their French, German, Bengali and Italian equivalents with the statement:

"From the above discussion it should be obvious that a lexeme-to-lexeme comparison of languages would not be very fruitful. (...) The learner has no automatic way to distinguish between central meanings and peripheral or secondary ones. Nor has he any way of determining universally what will be metaphorical and what will not."

In this article we try to present certain alternatives to an ingenious "dictionary check-up" that was proved by Di Pietro to be largely ineffective.

2.0. Our discussion of the organization of the lexicon would not be complete if, in addition to the semanto-syntactic nets of relationships mentioned above, still another type of nets (of a completely different status) was not taken into consideration. These, as they will be called here morpho-phonological nets *cannot* be characterized either in terms of Weinreich lexical items or in terms of morphonological units alone. In a rather informal way the difference between the "vertical" and "horizontal" lexical nets (presented in § 1.1. above) and morpho-phonological nets discussed here could be stated as follows: within the nets of the first type meaning is assigned to STRUCTURES (morphemes, words, compounds, phrases, etc.) at the level "higher" than phonology (phonetics), moreover, every single net-member here has its individual meaning restricted by the cooccurring members and there is no single meaning assignable to a single net as a whole; within our morpho-phonological nets, however, "meaning" (cf. below) is derivatively assigned to either purely phonological (phonetic) units or other elements AS phonological elements, this particular meaning assigned to a unit is common to the whole net.

Elements that are subject to morpho-phonological net arrangements may be as small as a single distinctive feature; e. g. introduction of the feature +palatal to the structure of the last syllable may be said to denote small size and/or endearment in Polish[8] (cf. *tato, tatuś, tatusiek, tatsio, tatuniek* — "*daddy, father*"). Meanings seem to be assignable to nets of that type on the basis of the fact that their members share a certain phoneme or a group of phonemes of a nonmorphological status. As in the case of contrastive features, examples here could be taken from analysis of the so called "phonetic symbolism" (cf. Marchand 1960:313 - 341). One could also mention here dialectal values of certain phonetic contrasts, and Zabrocki's "word-differentiating morphemes" (see Fisiak 1965:23) of the *gl*-type in English "light, shine" (e. g. *gleam, gleed, glisten, glow, glent, glimmer, glitter*, etc.) or *-ina/-yna* -type in Polish "berry" (*jeżyna, malina, żurawina.*). Similarly, elements may belong to a net on the basis of their single rhyme-pattern, or assonanoce and alliteration pattern (cf. Marchand 1960:ch. 8).

The term "meaningful organization" in the case of morpho-phonological nets, seems to be based on a slightly extended notion of meaning. In a rather imprecise manner this difference might be stated as follows: while meaningful lexical items in lexical nets have their meaning due to such factors (=relations) as reference, sense, presupposition, net-position — the meaning being primarily of the "intellectual" type — elements of morphophonological nets base their notion of meaning on linguistic and extralinguistic associations; this type of meaning is also largely of the "emotive" type.[9] In case linguistic associations are the source of a given net meaning, this meaning is clearly secondary, i.e. "borrowed" from a single W-lexical item which belongs to a given lexical net.

Accidentally, the notion of the "secondary" (or derived) meanings could be made use of at the level of morphological analysis in any theory of language that assumes that morphemes are form-meaning composites *of a definable meaning*.

An example might be useful at this point. Thus a Polish morphological series (accountable for in terms of morphonological rules): *ręk-* :: *ręc-* :: *ręč-* :: *rąk-* is usually said to be "a series of forms united by a common meaning" or "to be allomorphs of a single morpheme with a meaning M". The meaning is usually said to be **RĘKA** "hand". But this is clearly a secondary ("borrowed") meaning with referential restrictions of the W-lexical item "hand" only. The four listed phonetic forms do have this meaning only in certain "words" (roughly, only in case of Lyons' lexemes) e. g.: *ręka* (nom., sg., fem.), *ręce* (dat. sg.; nom. pl.), *rąk* (gen. pl.). The case of *ręć-* is doubtful: *ręczny*??? "not mechanical".

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[8] It was J. N. Baudouin de Courtenay who first noticed that in addition to the purely differential meaning (of the information theory type, i. e. where there is a choice there is meaning) distinctive features may have this second type of "full" meaning.

The example is taken from Baudouin de Courtenay (1922). Courtenay's distinctive features were of two types: acoustic and auditory; +palatal in this case represents the second type.

[9] Obviously, it must be assumed within the theory that partial phonetic/morphophonetic/orthographic similarity of elements within morpho-phonological nets MAY but does not necessarily have to presuppose semanto-syntactic similarity (=may entail net relationship of the first, lexical type). In other words, such similarity is neither a necessary nor a sufficient condition for activating lexical nets, though speakers of most languages take the similarity to be a sufficient condition.

Thus it cannot be the morpheme, but some still more abstract unit which enters all the lexical-net relations (with such W-items as e. g.: *arm*, *shoulder*, *glove*, etc.). Yet, there are certain relations "forced upon Polish" by the form of the morpheme alone and those relations cannot be traced along semanto-syntactic nets alone but must refer to morpho-phonological nets, cf. *ręcznik* "towel", *poręczyć* "guarantee", *zręczny* "skillful", *wyręczyć* "do sth. for sb. as a favour". *rękaw* "sleeve". A Polish learner of English will not be very successful if he looks for the E. *towel* in the *hand*- net (? hand drier).

There seem to be phenomena present in many languages that could be called forth to support our assumption concerning the existence of two independent types of nets in the organization of the lexicon. They include, among others, native speaker's intuitions concerning puns, "word games", alliteration, sound symbolism, lexical creativity, or rhyme (especially as it is used in children games, in rhyming name calling, counting-outrhymes, nonsensical verses and nonsensical "word exercises"). Similarly, native speakers' characteristic language errors known as folk (or false) etymologies supoprt the assumption.

We would like to recognize here the need for investigating morpho-phonological nets of that type as a part of contrastive lexical studies since a great deal of what is termed the "foreign language feel" could be accounted for in terms of those nets.

Polish learners of English, for instance, will have to be made sensitive to (at least) the alliteration principles of English, as well as to certain most typical sound symbolism of the *gl-*, *cr-*, *sw-* type. It would not be unreasonable to introduce into FLT syllabuses *Mother Goose* or some other standard handbooks of nursery rhymes, to present the more advanced learner with the most banal, naive — thus most typical — systems of English rhyme (alliteration) sound symbolism systems. For very obvious reasons his classes in English literature will help him little in this respect.

3.0. Both our mention of the different "value judgements" attached by native speakers to individual lexical items (see: § 1.1.1 above) and our sketchy analysis of the two distinct types of nets into which the lexicon is organized, seem to point to the same fact, namely, that lexicons of human languages suffer from a conspicuous "lack of democracy" in their structures.

This heterogeneity is also the subject matter of the present section. It seems that for both formal and semantic reasons, contrastive lexical studies must accept one other dychotomy, i.e. the distinction between *closed* and *open* *sets of lexical items* (cf. Lyons 1968:436,[10] the distinction overlaps to a large extent with the classification of lexical categories into minor and major).

Within the field of lexical contrastive studies we would stipulate that only the open sets of lexical items be investigated. Analysis of the closed sets of items (by no means less important) will be carried out within semanto-syntax and should be made available to the lexicographer in the form of a taxonomic by-product (i.e. lists or indexes appended to the monographs) of those semanto-syntactic analyses.

In other words, it has been assumed here that only forms corresponding to nominal, verbal, adverbial and adjectival concepts[11] of English and Polish (and forms "converted" into such concepts) will be the subject matter of English-Polish lexical analysis.

Furthermore, we would like to assume that **NOMINAL CONCEPTS** ("names") are given precedence over the three remaining concepts.

As far as contrastive language studies are concerned (especially the pedagogically oriented ones) our decision seems to be intuitionally more correct than e. g. the Fillmorian "real-verb" precedence.[12] On account of their referential properties (but cf. footnote 13 below) and easily graspable ("contrastable") relations in terms of "more general" :: "more specific", a precedence of this type seems to account correctly for at least the foreign language learner's expectations concerning the L_2 lexicon.

Outside the domain of contrastive analysis proper, certain presuppositional properties of names as well as certain properties of language paraphrase and definition also seem to favour this approach. The former properties in traditional linguistic analysis are known as collocability and compatibility, or syntagmatic interdependence of structures. Similarly to the paraphrase and definitional properties of lexical items, the presuppositional properties seem to point to the fact that nominal concepts are the only obligatory category in all structures of the discussed type; (cf. Lyons 1968:440 and his examples: *bird : fly, fish : swim, blond : hair, addled : egg, drive : car, bite : teeth, kick : foot*).

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[10] There are certain differences between Lyons' approach and the one adopted here. Relevant at this point is the fact that Lyons operates in terms of lexemes and not W-lexical items and that he identifies the open set with lexical, and closed with grammatical items. Except for the fact that "grammatical" items may be "converted" into lexical, we would gladly identify W-lexical items with all and only members of the open class.

[11] In spite of Lyons' warning, we have decided to preserve the vague notion of concept in this paper as a pretheoretical term. We follow in this respect both, the two current trends of the TG school and the procedures of a number of logicians both, past and present, who do not find the insupportable.

[12] Fillmore's case grammar seems to be strongest whenever his formalized cases correspond to speakers' intuitions concerning "notional" classes (=categories) of nominal objects, for instance if the +Instrumental role or case correspond (to nouns which could be notionally defined as tools, instruments or materials used. Thus it could be predicted that +agentive and +objective but not temporal or locative would be most disputable cases.

Since neither the above assumption nor a similar, but more specific, hypothesis below can be justified adequately within the scope of the present paper, we would like to make the reader accept a more neutral version of the assumption, namely: if predicates may be said to presuppose both the number and functions of their arguments, so names (or rather arguments: their number and type, class or category) may be said to presuppose their predicate(s) or abstract relations of a predicative character (e. g.: part : : whole, class-inclusion, multiplication of classes, etc.). Presupposition in both cases seems to refer to a relation of the same type. Thus, both *open* :: *Agentive Arg.*, *Objective Arg.*, *Instrumental Arg.*; and *shoot* :: *gun* (with *pistol*, *firearm*, *weapon* in a "vertical" relation within the same net), *bird* :: *fly*, *bird* :: *egg* :: *lay* (and other "produce"-verbs) all are defined here as standing in the relation of presupposition.

The more specific hypothesis referred to in the previous paragraph may be stated as follows: out of the **NOMINAL CONCEPTS** (=**NOM**) there should be separated a universal, language independent class of basic concepts (they seem to be basic or primary in terms of language acquisition and language use at least), and this particular class of concepts comprises names of things, objects, artifacts, and animal and human beings. Particular members of the class are culture sensitive and the notion of the cultural overlap will have to be defined primarily in terms of this class' membership. This class will be referred to as **NOM.** (RES).[13]

The class **NOM.** (RES). has been separated here because the author would like to suggest that this particular class of names be analysed first within contrastive lexical studies. Most expectations of FL learners concern this class, and, consequently, most lexical language errors seem to fall within this category. The study of lexical gaps within the semanto-lexical field analysis as well as the field analysis itself if started from **NOM.** (RES).-analysis should be easiest and readily applicable in FLT. It also seems (but the author's belief will have to be proved) that it is the calss of **NOM.** (RES). at which the correspondence between notional and formal categories are definable.

4.0. It has been proved by the author elsewhere (Nowakowski 1976; see also Krzeszowski 1974:11 - 12) that the notion of congruence valid for other levels of language contrasts has no application in lexical contrastive studies. Similarly, it would be most unwise to uncritically adopt the notion of equivalence from semanto-syntactic studies in order to work out even a tentative definition of *equivalent lexical items*. Certain guesses can be made, for instance, the notion will have to be sensitive (made sensitive) with respect to language variety (cf. §1.1.1.), its referential properties, and its position in a given net (with respect to closest "neighbours"?? to all net members??) will be among its most important factors. Yet the definition itself will have to wait until much more is known about lexical nets and semanto-syntactic properties of lexical items.

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[13] The class **NOM.** (RES). corresponds to Katzian class of Physical Objects and the necessity for separating it could be partly defended along the same lines. Other arguments might be borrowed from a logical and philosophical trend known as "reism", cf. Kotarbiński's writings on the subject and some of Doroszewski's arguments in support of the theory in the lexicographic works of the latter. Unfortunately, there is no place in an article of this type to go any further into the problem than just to state the dependence of our argumentation on the theory.

It seems, however, that certain studies on (interlinguistic and intralinguistic) lexical paraphrase relations could speed the task of the linguist working on such definition. Thus, we would suggest to include into the scope of contrastive lexical analysis studies of following types: (§§ 4.1 - 4.4. below).

4.1. *Paraphrase relations holding between a single lexical item of L_1 and its "natural parapharase"*[14] *in L_2.*

It is assumed here after Lipińska (1974:168, 154) that the natural paraphrase holds when "a certain meaning X which is expressed in L_1 by means of one lexical item is expressed in L_2 ny means of more than one lexical items which stand in a well defined syntagmatic relationship one to another. Usually, the expression in L_2 has the form of some modification structure such that the head constituent of this structure corresponds to the archilexeme,[14] whereas the modifiers correspond to the other sememes[14] included in the meaning of the lexeme of L_1". (p. 168, cf. p. 154 "more lexical items but semantically simpler are used in L_2").

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[14] All references are to Lipińska (1974), where the reader finds the terms defined in a more detailed way. Archilexeme within the theory of lexical semantic fields is, roughly speaking, the most neutral and the most general lexeme within a given field, e. g.: *smell* is an archilexeme within a field that could include: *scent, aroma, fragrance*; *fetor, odour, stench*; *frowst*; *bouquet*. A sememe is a single componential meaning of a lexeme, e. g. *boy* may be analyzed into three sememes: MALE, YOUNG, HUMAN. Lexical gap is a lack of a lexeme in a language L_2 with respect to L_1 lexemes within a given comparable field, e. g. in the field with *smell* as archilexeme, English *with respect to* Polish has a lexical gap for which one may use a natural paraphrase: viz.: *swąd* :: *smell of burning*. The lexical gap illustrated above is an item gap. Polish with respect to English has a net-gap in the semantic field with the archilexeme *smak* "taste" which cannot be corrected with the help of any natural paraphrase, viz. *flavour, savour, relish, smack, tang*.

Similar phenomena of paraphrase have been discussed in terms of "analytic" vs. synthetic correspondences in Bańczerowski (1974), from both contrastive and theoretical point of view (his examples: *ende machen* :: *beenden*, *Glück wunschen* :: *congratulate*, *have breakfast* : : *zavtrakat'*).

Accidentally, Lipińska's 1974 "syntactic" monograph and Bańczerowski's 1974 "theoretical" paper are two best "lexical" studies in the project so far (a very good article of B. Lawendowski on corresponding lexical items referring to *women* in English and Polish has not been published).

It seems that certain additional restrictions should be added concerning the referential properties of the item and its paraphrase, and at least a restriction that would guarantee the same "variety" of language (style, emotional style, jargon, dialect, etc.).

The notion will be most useful if one tries to characterize such terms as lexical-item gaps vs. lexical-net gaps within contrastive lexical studies. Intralinguistic description will find the notion of natural paraphrase useful in accounting for certain types of synonymy relations.[14]

Examples of natural paraphrases are: *a piece of furniture* :: *mebel*, *tap* :: *stukać lekko* ("knock softly"), *lock* :: *zamknąć na klucz* / *kluczem* ("shut using/with a key"), *have breakfast* :: Rus. *zavtrakat'*, *smell of burning* :: *swąd*, etc. They are to be distinguished from "artificial paraphrases" (Lipińska 1974) used by the logician, philosopher and linguist; of the type: kill=CAUSE BECOME NOT ALIVE, brother=MALE SIBLING, etc.

4.1.1. The notion of natural paraphrase would be extended here to include the relation that obtains between a lexical item of L_1 and its proper definition (genus proximum+differentia specifica) in L_2. Formal similarities between paraphases of both types are obvious. This type of paraphrases will probably be most useful for defining equivalents to certain (characteristically English) nominalizations typical of professional jargons.

Paraphrases discussed in §§ 4.2. and 4.3. in spite of their difference from structures difined by Lipińska will also be regarded as natural paraphrases here.

4.2. Analysis of this particular type of paraphrase relation will verge on the boundary of linguistic lexical analysis and the art of translation. The subject matter here will encompass all possible paraphrases and equivalents of items which themselves are marked with respect to language variety. In addition to markings listed in § 1.1.1. certain types of idioms (if stylistically marked) will be included here. The difficulties with which the investigator will be faced may be grasped by the reader if he tries to answer which of the Polish items is a "closest" equivalent to E. *kick the bucket* :: *przenieść się na łono Abrahama*, *wykitować*, *odwalić kitę*, *wyciągnąć nogi*//*kopyta*, *wykorkować*. Synonymic relations among English and Polish "idiom nets" might be of some help here (to exclude for instance the first possible equivalent). In many cases, however, a principled choice is very difficult, if possible at all. (Curiously, it seems that *wyciągnąć nogi*/*kopyta* is statistically the most frequent translation equivalent — could it be because of the cross-linguistic presuppositional relations between *kick* and *nogi*/*kopyta* "legs, hoofs"?).

4.3. This type of paraphrase relations has already been touched upon in § 1.1.1.a. In cases of this type, the investigator, if forced by semantic factors (notably reference and presupposition) will have to cross both the hypothetical "upper" and "lower" boundaries of the definition of lexical item; — the hypothetical (implausible, it seems) upper boundary defined by the requirement that the form (=morphological structure) of a lexical item determined by the shape of the Lyons' lexeme, the lower boundary restricted by the assumption that no bound morpheme can be a W-lexical item.

As was said before, both suggestions are unrealistic. Certainly we would like to state that the following Polish items are single lexical items: *maszyna do pisania*, *wiatrak*, *parostatek*, *statek parowy*. And similarly, in spite of formal differences the investigator is forced to treat the English items as equivalent *typewriter*, *windmill*, *steamer*, *steamship* (if not for other reasons, than on account of their reference. Note that all items are by definition unambiguous).

It seems that paraphrase relations hold between meanings of morphemes (secondary, generalized meanings, cf. § 2.0.) and lexical items, i. e. in the example above: between *-er* (of *type- writer*) and Pol. *maszyna*, between *-er* (of steamer) and *statek*, and between *-ak* (of P. *wiatrak*) and E. *mill*. This seems to be a classical example of the correspondence between notional categories (tool, instrument) and its formal marking (instrumental *-er* marker).

Interesting as the problem may be, it certainly needs elaboration (cf. Nowakowski (1976) with reservations as in footnote 4). We would like to suggest only that contrastive lexical studies should include generalized descriptions of semantic relationships (=net analysis) which have formal markers in ANY of the compared languages (irrespective of whether the other language does or does not mark a given notional category in a formal way). Thus, for instance, we enwisage studies of **LOCATIVE NOUNS** in English to account for the Polish locative marker *-isko*.

4.4. Lastly, we would like to recommend what seems to be the most fascinating and the most difficult paraphrase relation in lexical studies (both within a language and across language boundaries), viz. paraphrase holding between metaphoric vs. nonmetaphoric W-lexical items.

The relations are theoretically very interesting for a number of reasons. First of all, since Weinreich lexical item is unambiguous by definition, the investigator would have to make a distinction between uninteresting cases of pure-chance homonymy (e. g. Pol. *zamek* “castle”, *zamek* “zipper”) and those that are reflexes of rule governed metaphorical processes. This, in turn, would allow him to come closer to a definition of the notion of a possible metaphor. Since children most probably acquire lexicon in the form of a list of W-lexical items, studies of metaphorical processes would have serious implications on investigating the so-called “growth of word meaning” within language acquisition analysis.

It seems that certain basically metaphorical processes have becomes so common to us as language users that very few would even think about applying the literary-tradition burdened term to relationships in e. g.: *This man invented a square wheel* versus *This man weighs 150 pounds*; or *The dissertation was about Chinese sex customs* vs. *The dissertation was on the piano*. And is the item *piano* in the fourth example the same or different from *John was playing the piano*? It seems that both the subject nouns in the second and third sentence, and the first mention of the item *piano* illustrate metaphorized nouns (roughly two reifications and a locus-formation).

Certain other metaphors come very close in their relation to the non-metaphoric items of the same form to relationships that will have to be (or have already been) postulated for explaining (=describing and postulating an underlying structure for) such nominal elements as compounds or other nominal semanto-syntactic structures (cf. McCawley (1968); see also Nowakowski (1976)).

The use of such studies in contrasting lexicons of any two languages is related to what has been termed "the growth of word meaning" (Anglin 1970:1 - 12). Ultimately, one should aim at providing the FL learner with certain principles of how central meanings and peripheral or secondary ones are related (what is referred to here are "meanings of lexemes" as they are discussed in Di Pietro (1971 : 121); in our terms it would be more proper to talk about the relationship of W-lexical items of the same form). Additionally, certain lexical gaps are typically "gaps in metaphoric processes" operating in, for instance, Polish in case of equivalents of such lexemes as E. *dog*, *heart* (to take words of a very high frequency) in such contexts as *bench dog* "imak", *chain dog* "łańcuchowy hak chwytny", *hand dog* "klucz żerdziowy (do łączenia żerdzi wiertniczych)", *dogspike* "hak szynowy, szyniak", *trap dog* "zapadka zwalniająca", and in all other technical uses; or, in the case of *heart*: *at the heart of*, *the heart of the matter*, *take the heart put of* the equivalents are "sedno rzeczy, sedno sprawy, istota rzeczy, rdzeń". Quite naturally a number of lexical errors will have to be explained in terms of those gaps.

5.0. We would like to close the article listing certain lexical contrastive problems that have either been excluded from the paper or have only been mentioned in passing. The reader may get acquainted with certain aspects of lexical analysis of those types from publications of the Romanian-English Contrastive Analysis Project (*Reports and studies* 1971: 127 - 144, 27 - 30) and the Serbo-Croatian — English Contrastive Project.

The problems of borrowings and cognates seem to have fascinated linguists long before contrastive language studies gained on popularity (at least in Europe). Studies of that type were carried out from either a formal standpoint (i. e. morphographemic, morphological, phonetic and phonological influences of the language-as-borrower upon the lexemes of L_1 were investigated), or from a combined formal and semantic approach. The latter studies are better known as studies of lexical cognates. Both the L_1-L_2 borrowings and L L_1 transfers were usually taken into consideration. Distinctions were drawn between orthographic borrowings (and cognates), e. g. *kowboj*, *Yale*, *jazz*, and phoneticized (oral) borrowings, e. g. *mecz*, *aut*, *faul* ("match", "out", "foul").

Both were separated from various types of calques, e. g. *drapacz chmur* "skyscraper", *słonecznik* "sunflower", *niezapominajka* "forget-me-not". Semanto-morphological analysis of cognates attempted at drawing distinctions between proper cognates and false cognates (in the latter case formal similarity corresponds to semantic difference) in order to define the notion of semantic overlap and oppose it to that of formal overlap (i. e. relations of meanings and relations of forms between L_1 and L_2 defined as either one-to-many or many-to-one). Areas of overlap as source of potential language errors were of utmost importance to thé investigator.

The best descriptions of English loanwords in Polish is Fisiak's (1965) unpublished PhD dissertation. Some other available printed material can be also found in Fisiak (1960, 1962, 1963, 1964, 1970, 1975).

5.0.1. One other áspect of lexical language studies should be mentioned here, viz. the a posteriori lexical error analysis (i. e. analysis of mistakes made within the area of lexeme use by Polish learners of English). Unlike in the case of previous studies, the author has on purpose paid little attention to the area. Two reasons could be given:

a. error analyses are most useful as a supplement to contrastive lexical studies; minimally the investigator must know which errors are grammatical, which are lexical, and must be able to principally distinguish between typical lexical errors of various types (e. g.: resulting from L_2 net generalization, L_1 transfer, from L_1 or L_2 lexical gaps, etc.) and accidental lexical mistakes. Given the present state of contrastive lexical analysis within our project, it seemed to the author premature to call for a supplement of that type.

b. To those who look at lexical analysis of errors as an alternative to contrastive lexical analysis of errors as an alternative to contrastive lexical analysis, we would like to dedicate the following quotation from Carl James with whom the author wholly agrees:

"This is a strange type of alternative, since the two are so different in their approaches: *a priori* versus *a posteriori* detection of error. It is like the alternative: give up smoking or have the tumor removed by surgery". (James 1971:55).

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VARIATION AND ARGUMENTATION IN PHONOLOGY

EDMUND GUSSMANN

Maria Curie-Skłodowska University, Lublin

One of the unsolved puzzles connected with phonological representations (and, inferentially, also with rules) is the extent to which the feature composition of segments, their number and order, may diverge from the corresponding phonetic representations. This is, of course, the well-known abstractness controversy initiated in 1968 by Paul Kiparsky, where the views expressed vacillate between radically concrete and radically abstract (for surveys of opinions, see Kiparsky 1971; Kiparsky 1973; Vago 1973; Jensen 1974; Crothers 1973; Fischer-Jørgensen 1975a). The anti-abstract positions usually hold that representations involving, say, the context-free merger of some underlying contrasts are irrecoverable and difficult to learn, hence they should be ruled out completely or given a prohibitive cost. The anti-abstract analyses, on the other hand, have claimed, often only implicitly, that abstract analyses are necessary if generalisations behind language facts are not to be left unexpressed. We observe, however, that the controversy involves a somewhat overemphasised polarisation of positions, i. e. each analysis is classified as either abstract or concrete while what is obviously at stake is no so much a binary division but rather a gradual hierarchy with each analysis involving a certain degree of abstractness (or concreteness). Furthermore, the term 'abstractness' is ambiguous (for a survey of meanings, see Jensen 1974) and there are cases which must be termed abstract although they would be unquestionably accepted by (almost) everyone.

An assumption which has met with a well-nigh universal rejection is contained in the statement "ideal speaker-hearer in a homogenous speech community". The failings of this assumption are generally known and need not be repeated here — in fact they gave rise to a new trend in liguistic analysis. The native speaker's linguistic competence is now viewed as being more comprehensive than before, accomodating not only his own dialect but also the existing variation, becoming thus polylectal (Bailey 1973). Much phonological study of linguistic variation has been concerned with low-level phonetic data although, of course, variation may and probably does involve deeper rules as well. In the present paper, without adopting the variationist position, I would like to suggest that if we take seriously the case for a more realistic competence and hence for a more realistic model of the process of language acquisition,[1] we are brought to the conclusion that the existence of variation actually supports non-concrete phonology. In other words, if in establishing representations and rules we take into account not only structural or language-internal evidence but also data from observed variation, the resulting grammar must be broader than when dealing with the idealised situation. Below we present a number of problematic cases in Polish and English phonology juxtaposing structural and variational evidence.

The first case we shall consider are the Polish laterals. Phonetically there is one basic lateral [l] whose variants depending on the phonetic context will be disregarded here. It alternates in a number of cases with the bilabial semivowel [w] which suggests that the two sounds are related in a systematic way. Indeed, a slightly closer scrutiny reveals that [l] behaves phonologically as a palatal equivalent of [w].

First observe restrictions on the combinations of the two sounds with the most strongly palatalising element in Polish, i.e. the front vowel [i] — whereas [li] is a perfectly well-formed sequence, attested in numerous words both native and foreign e.g.:

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[1] Various arguments from language acquisition have at times been adduced although their significance is far from obvious. The concept of learning difficulty has become one of the most frequently brandished catch-words which are intended to reveal what the adult knows that is difficult for the child. Although certain things are probably more difficult to learn than others, it is pointless and misleading to establish the difficulties a priori. One might just as well argue that the Slavic perfective-imperfective verbal distinction is difficult to learn; or the distinction between alveolar and dental [n] because very few people (trained phoneticians including) can hear it in isolation. In other words, what is difficult for the linguist does not necessarily have to be difficult for the child.

Another thing connected with a more realistic picture of language acquisition is the time-span involved. Arguments of the type 'vowel shift cannot be a rule of English grammar because it is based on morphemes acquired later in life' assume that the process of the acquisition of phonology is completed at some early point. Again nothing much supports such a hypothesis. In fact, it appears that even spelling may affect phonology; as Bailey (1973: 28) puts it "that literacy greatly affects competence and one's underlying representations can hardly be doubted, despite all the insistence by modern linguists on the spoken form of language. And despite exceptions (which one may or may not able to account for) [ŋ] seems to be more frequent for underlying /n/ before orthographic 'k' and 'g' than before 'c' or 'q' (as in *Bancroft*, *Hancock*, and *banquet* contrast *Bankok* and *Bengali*)".

lipa 'lime', *elizja* 'elision', *stolica* 'capital', *byli* 'they (masc.) were', the sequence *[wi] is totally impossible. The phonetically non-palatalising [**i**] vowel, on the other hand, can follow [w] but cannot follow [l] e.g.:
łysy 'bald', *upływ* 'elapse', *były* 'they (fem.) were'.
We thus observe the following distributional situation:

li * l**i** [li] *[l**i**]
*wi w**i** *[wi] [w**i**]

These facts suggest that phonologically we have one consonant which, under the influence of the front high vowel is palatalised while remaining unaffected in non-palatalising environments. The distributional facts are further confirmed by a considerable amount of morphological alternations. These involve both flectional and derivational contexts (as the letters '*l*' and '*ł*' always stand for a dental lateral and a bilabial semivoweł respectively, we use conventional spelling rather than phonetic transcriptions in our examples below); [l] appears in

a) dat. and loc. sg. if the ending is *-e*, e.g.:
skała 'rock' — *skale*
koło 'wheel' — *kole*
tył 'back' — *tyle*
nabiał 'dairy' — *nabiale*

b) nom. pl. masc. pers. (nouns and adjectives), e.g.:
anioł 'angel' — *anieli*
diabeł 'devil' — *diabli*
cały 'whole' — *cali*
mały 'small' — *mali*
umarły 'deceased' — *umarli*

c) derived imperfectives, e.g.:
siła 'strength' — *wysilać* 'exert'
uchwała 'resolution' — *uchwalać* 'pass a resolution'
strzał 'shot' — *strzelać* 'shoot'
wesoły 'merry' — *rozweselać* 'make merry'
szkoła 'school' — *wyszkalać* 'educate'
mydło 'soap' — *zamydlać* 'id. vb.'

d) various derivational suffixes which sometimes do and very often do not preserve a palatalising vowel phonetically, e.g.:
-eć *mały* 'small' — *maleć* 'decrease'
szał 'range' — *szaleć* 'rave'
dorosły 'adult' — *dorośleć* 'mature, vb.'
podły 'wicked' — *podleć* 'become wicked'
-ić *szkło* 'glass' — *szklić* 'put glass in'
mgła 'fog' — *zamglić się* 'become foggy'
chwała 'glory' — *chwalić* 'praise'
-i *pszczoła* 'bee' — *pszczeli* 'id. adj.'

sokół 'falcon' — *sokoli* 'id. adj.'
orzeł 'eagle' — *orli* 'id. adj.'
osioł 'donkey' — *ośli* 'id. adj.'
-ik *arsenał* 'arsenal' — *arsenalik* 'id. dimin.'
stół 'table' — *stolik* 'id. dimin.'
kryształ 'cut glass' — *kryszialik* 'id. dimin.'
igła 'needle' — *iglica* 'spire'
-ski *sowizdrzał* 'scamp' — *sowizdrzalski* 'roguish'
generał 'general' — *generalski* 'id. adj.'
kardynał 'cardinal' — *kardynalski* 'id. adj.'
trybunał 'tribunal' — *trybunalski* 'id. adj.'
-stwo *poseł* 'envoy' — *poselstwo* 'legation'
gaduła 'chatterbox' — *gadulstwo* 'talkativeness'
diabeł 'devil' — *diabelstwo* 'devilishness'
apostoł 'apostle' — *apostolstwo* 'apostolate'
-ny *skała* 'rock' — *skalny* 'rocky'
upał 'heat' — *upalny* 'sweltering'
oryginał 'original' — *oryginalny* 'id. adj.'
mgła 'fog' — *mgielny* 'foggy'
-nik *cło* 'duty' — *celnik* 'customs official'
siła 'strength' — *silnik* 'engine'
zioło 'herb' — *zielnik* 'herbarium'
kwartał 'quarter' — *kwartalnik* 'quarterly; n.
-ec *mały* 'small' — *malec* 'small boy'
widły 'garden fork' — *widelec* 'fork'
wał 'ridge' — *walec* 'roller'
zuchwały 'impudent' — *zuchwalec* 'sauce box'

All other consonants when appearing in the above illustrated contexts also undergo palatalisation processes although their outputs tend to differ due to the existence of several rules for palatalisation in Polish (details Gussmann (1973); Laskowski (1975)). In the case of the lateral, the output of all palatalisations is neutralised[2] to [l]. We must now find the phonological element underlying the alternations. It is, quite simply, the non-palatal equivalent of [l], i.e. /l/. This /l/ undergoes palatalisation if followed by a front vowel phonologically and in all other cases it is changed into a bilabial semivowel. This articulatorily somewhat unusual change appears justifiable on acoustic grounds (Ohala 1974:256 ff).

The interesting point about it is that we are positing a segment phonologically which never appears phonetically. This is not a case of absolute neutrali-

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[2] Neutralisation of the results of different palatalisations is also true about the remaining sonorants and labials.

sation though, as no opposition is suspended. What actually does happen here is that the segment undergoes a drastic modification in its feature composition although all systematic relations prior to the modification are also observed after it (i.e., the formal structure is maintained although its content has changed). In other words, after the application of the rules of palatalisation, all non-palatalised laterals undergo a context-free change into a bilabial semivowel. In effect this is an automatic, non-neutralising process (Kiparsky 1973: 67 ff) not very much different in kind from, say, those cases in numerous dialects of English where the lateral is velarised in every context. Surely no one would wish to claim that velarisation must be included in phonological representations; rather the lateral is clear /l/ which never, in fact, appears phonetically, being modified in every context by some detail rule(s). The Polish case differs from this example only in that it involves more features. Thus we have a case well supported both by language internal evicence and by general phonetic considerations of a phonological segment which differs considerably from its phonetic reflex and which, as such, never emerges on the surface. There is no doubt, however, that this abstract segment is necessary, all manners of concrete phonology notwithstanding. To deny this is to claim that speakers of Polish treat the alternations in I and in II in different ways.

I

1. *szkoła* 'school' — *szkole* 'id. dat. sg.'
2. *mały* 'small' — *mali* 'id. pl. masc. pers.'
3. *siła* 'strength' — *wysilać* 'exert'
4. *szał* 'rage' — *szaleć* 'rave'
5. *piekło* 'hell' — *pieklić* 'raise hell'
6. *sokół* 'falcon' — *sokoli* 'id. adj.'
7. *stół* 'table' — *stolik* 'id. dimin.'
8. *orzeł* 'eagle' — *orli* 'id. adj.'
9. *sowizdrzał* 'scamp' — *sowizdrzalski* 'id. adj.'
10. *poseł* 'envoy' — *poselski* 'id. adj.'
11. *upał* 'heat' — *upalny* 'id. adj.'

II

1. *wata* 'cotton-wool' — *wacie* 'id. dat. sg.'
2. *wielki* 'great' — *wielcy* 'id. nom. pl. masc. pers.
3. *swoboda* 'liberty' — *oswobadzać* 'set free'
4. *krzyk* 'scream' — *krzyczeć* 'id. vb.'
5. *kosa* 'scythe' — *kosić* 'mow'
6. *żaba* 'frog' — *żabi* 'id. adj.'

7. *wóz* 'cart' — *wozik* 'id. dimin.'
8. *wdowa* 'widow' — *wdowi* 'id. adj.'
9. *pan* 'sir' — *pański* 'id. adj.'
10. *gospodarz* 'landlord' — *gospodarski* 'id. adj.'
11. *cmentarz* 'cemetery' — *cmentarny* 'id. adj.'

Needless to say, there is not a shadow of evidence that different processes underlie the various classes of data and, unless we are interested in separating them we must postulate underyling /ł/.

The existence of variation supports this analysis still further, for the velarised lateral actually appears phonetically in some speakers of the older generation, dialectally and also in certain styles of speech (e.g. stage language, where until recently the velarised [ł] was the recommended variant). The correspondence between this [ł] and the general Polish [w] is straightforward: every [w] derived from /ł/[3] corresponds to [ł] in the group of speakers who use it phonetically. This [ł] then is clearly a vanishing sound in the sense that fewer and fewer speakers use it in normal speech, it is furthermore clearly marked either geographically or by generation and, in fact, for the majority of speakers this is a foreign sound — when learning Russian for example they usually replace the Russian [ł] with the Polish [w].[4]

So far we have been concerned with a fairly clear situation — it was clear in the sense that evidence for the abstract analysis was overwhelming and secondly because the segment postulated, although not occurring phonetically, was not used as a means of preserving an underlying contrast with no surface realisation. But the analysis covered almost exclusively situations arising at morpheme boundaries, i.e. the processes applied to derived forms (Kiparsky 1973:60 ff). Once we move inside the morpheme, we have to make several decisions, none of which is as nicely support as the case above. The following phonetic combinations require description and comment:

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[3] We make the reservation "derived from /ł/" in order to exclude the [w] which appears in certain foreign words, e.g.: *auto* 'car', *sauna* 'sauna', *Europa* 'Europe' etc.

[4] The existence of a situation where a foreign sound similar (or identical) in feature composition to an underlying native segment is nonetheless replaced by a native sound differing from it considerably far from refuting the reality of the underlying segments and representations merely shows the *ex definitione* obvious fact that phonological elements can NOT be equated with phonetic ones. The point would not be even worth mentioning had it not been for the fact that several people have criticised phonological representations as being too abstract on the grounds that e.g. speakers of English cannot pronounce [ɣ] or [œ] etc. This sort of criticism is completely irrelevant and it misses the whole point about phonological representations of any kind. Speakers of a language generally find it difficult to pronounce any sound combinations which diverge from surface phonotactic constraints. Thus speakers of English cannot pronounce the velar nasal initially or the clear [l] in isolation but very little, if any thing, follows from this.

[la, lo, lu], i.e. cases where the palatal lateral is followed by a non-palatal vowel and

[we], i.e. the case where the non-palatal lateral (i.e. bilabial semivowel) is followed by a front (palatal) vowel. (We have already provided an explanation for the palatal nature of the consonant when preceding a front vowel.)

The presence of [we] sequences really amounts to saying that the rule of palatalisation is not globally transparent, which in itself is nothing unusual. The major source of opacity is the fact that the surface vowel [e] can be either palatalising or non-palatalising, which means in phonological terms that the non-palatalising [e] is, in fact, not /e/ at the stage in the derivation where the palatalisation rule applies.[5] One such case is the [e] of the instr. sg. ending *-em*, as against the dat. sg. ending *-e*:

dół 'pit' — *dolem* — *dole*
kolo 'wheel' — *kolem* — *kole*
kawal 'prank' — *kawalem* — *kawale*
dziąslo 'gum' — *dziąslem* — *dziąśle*

The same is true about all other consonants in Polish:

kot 'cat' — *kotem* — *kocie*
ląd 'land' — *lądem* — *lądzie*
biuro 'office' — *biurem* — *biurze*
mięso 'meat' — *mięsem* — *mięsie*

The non-palatalising [e] has been intepreted as originating from an underlying /ŏ/ (Gussmann 1973) and as inserted by epenthesis (Laskowski 1975:81).

Another such case is the diminutive suffix *-ek-* which has been interpreted as deriving from underlying /ŏk/ (Gussmann 1973) and from /y̌k/ (Laskowski 1975:69), e.g.:

dół 'pit' — *dolek*
kolo 'wheel' — *kółko*
kawal 'prank; large piece of' — *kawalek* 'bit'
dziąslo 'gum' — *dziąselek* 'id. dimin. gen. pl.'

The same is true about the adjectival endings *-ego, -emu*, etc.:

bialy 'white' — *bialego, bialemu, bialej*, but: *biali*
caly 'whole' — *calego, calemu, calej*, but: *cali*

and compare also other consonants in the same grammatical positions:

dobry 'good' — *dobrego, dobremu, dobrej*, but: *dobrzy*
zielony 'green' — *zielonego, zielonemu, zielonej*, but: *zieleni*
bosy 'bare-footed' — *bosego, bosemu, bosej*, but: *bosi*

These Laskowski (1975: 96) interprets, correctly in my opinion, by positing phonological representations for the endings which do not begin with a front vowel and then a truncation rule which, roughly speaking, simplifies */oje/* to [e]. Further support for the truncation rule can be found in the pronouns which exhibit both a full and a reduced form:

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[5] Cp. a similar discussion of the palatalising and non-palatalising e's in Czech: Anderson and Browne (1973).

mój 'my' — *mojego/mego, mojemu/memu, mojej/mej* 'gen. sg. masc., dat. sg. masc., dat. sg. fem'.

twój 'your' — *twojego/twego, twojemu/twemu, twojej/twej* 'gen. sg. masc., dat. sg. masc., dat. sg. fem.'

Several more examples where the front vowel [e] follows [w] phonetically can be described by means of equally uncontroversial rules but we shall disregard those further cases here.

All these pieces of evidence indicate that when the lateral is followed by a front vowel phonologically it surfaces as a palatal consonant phonetically and, furthermore, that surface sequences are due to the operation of independently needed rules. There is, of course, nothing unusual about [w] being followed by a back vowel and I know of no instance where such a back vowel could be derived from an underlying front one.

The situation emerging thus far is fairly clear: whenever the segment /ł/ is followed phonologically by a front vowel it undergoes palatalisation and in all other cases the lateral is turned into a semivowel. In several contexts the palatalisation rule is made opaque by later processes which produce the front vowel [e] after the semivowel. What is more difficult to interpret is the presence of palatal [l] before back vowels in words like:[6]

ludzie 'people', *los* 'fate', *lala* 'doll'.[7]

As these words do not exhibit any alternations involving either the non-palatal semivowel or at least a front vowel, one might be brought to the conclusion that /l/ must be recognised as an underlying segment and consequently the non-alternating morphemes entered lexically with it. This would naturally mean that a phonological contrast between velarised and non-velarised laterals has to be introduced into Polish phonology. This is a simple (not to say simplistic) solution which does away not only with the difficulties at hand but also with a number of interesting issues involved in our case. For one thing the underlying distribution of the two laterals would be highly skewed with /l/ appearing only before some back vowels and /ł/ everywhere. Secondly and much more importantly, the factual basis for such a phonological split, on closer inspection, turns out to be flimsy at best because it is made up largely of words are synchronically foreign:

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[6] I take it that in cases where underlying /ł/ is directly recoverable (Gussmann 1976) from sequences of [ł] plus a front vowel, it does not require special justification.

[7] At the expense of being accused of beating a dead horse we might mention that taxonomic minimal pairs do not constitute a counterargument to this claim. For one thing, most of the so-called minimal pairs not only involve a phonetic contrast but also a grammatical one; if such pairs are to reflect those sound distinctions which must be observed if confusions are to be avoided, then the most typical examples prove nothing for pairs such as *lub* 'or' — *łup* 'booty', *stal* 'steel' — *stał* 'he stood', etc. are unlikely to ever appear in the same position in the utterance. I can think of only two genuine pairs not involving grammatical contrasts: *laska* 'stick' — *łaska* 'mercy' and *szal* 'scarf' — *szał* 'rage'. However, one cannot sensibly restructure the whole system of the language on the basis of two examples. We take up this point below.

labirynt 'labyrinth', *lakier* 'varnish', *laser* 'laser', *lafirynda* 'slut', *lawa* 'lava', *lament* 'lament', n.';

lokal 'place', *lokomocja* 'locomotion', *loteria* 'lottery', *lont* 'blasting fuse', *lotos* 'lotus';

lupa 'hand-glass', *lumpować się* 'revel', *luksus* 'luxury', *lutnia* 'lute', *luz* 'looseness', etc.

Here the [l] would have to be recognised as an underlying segment but as the existence of stratified lexicons with phonological and other peculiarities is hardly surprising, we can disregard such words here completely. Once foreign morphemes are eliminated as potential counterexamples, we are left with a handful of words of which some (A) exhibit a front-back vocalic alternation thus pointing to an underlying non-palatal consonant while others (B) indeed show no modifications in shape whatever.

A

lać 'pour; spank', *lanie* 'spanking' — *leje* 'vb. 3 sg.'
las 'wood' — *lesie* 'id. loc. sg.' — *leśny* 'id. adj.'
lato 'summer' — *lecie* 'id. loc. sg.' — *letni* 'id. adj.'
latać 'fly' — *lecieć* 'id. perf.'
lot 'flight' — *leci* 'he flies'
ląg 'hatching' — *lęgu* 'id. gen. sg.'
ogląd 'inspection' — *oględny* 'careful'

B

larwa 'maggot', *ląd* 'land', *lód* 'ice', *lubić* 'like', *lub* 'or', *luty* 'February', *laska* 'stick', *lustro* 'mirror', *los* 'fate',[8] *lala* 'doll', *lulać* 'lull'.[9]

I take it that the presence of a vocalic alternation (as in A) justifies positing an underlying non-palatal lateral in spite of the absence of any direct consonantal alternations. The vocalic shift is governed, putting it vaguely and inadequately, by the principle that vowels become back before a non-palatal consonant, hence *las* as against *lesie* etc.[10] Observe that the same rule might be made res-

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[8] There is no reason to treat the last two items as synchronically foreign in spite of their diachronic foreignness.

[9] The words *lala* 'doll' and *lulać* 'lull' are peculiar in that they appear to be (quasi) onomatopeic.

[10] The rule needs to be fully analysed as the account given in Laskowski (1975) is not very satisfactory.

ponsible for the absence of phonetic alternations in words like *laska* 'stick', *larwa* 'maggot' for here the requirement of the rule would be met in every case, i.e. the consonant following the root vowel is never palatalised. Thus the rule of vowel shift cannot apply in *lesie* because of the palatal [ś] but it can apply to *lasce* /lēsk+/[11] because the immediately following /s/ is not palatal (cp. also *larwa* — *larwie* with non-palatal [r] as against *miara* — *mierze* 'measurement', *wiara* — *wierze* 'faith', where the underlying /r/ is palatalised and ultimately changed into a spirant). Thus the absence of alternations is here accidental and in fact completely predictable from the segmental composition of morphemes. We can thus remove these words as counterexamples to deriving all phonetic *l*'s from the underlying /l/. What we are left with are basically *-lu-* sequences and possibly a couple of exceptions. We have nothing to say about the latter while the former, apart from the fact that these are precious few of them, could be handled in several ways, either in agreement with Lightner's (1972:57) suggestion for Russian, by postulating the underlying /eu/ diphthong which causes palatalisation and subsequently is monophthongised or, less abstractly, by postulating an underlying /lj/ with the glide again removed after it has caused palatalisation of the lateral.[12] But, as the word handle implies, there is no particularly strong motivation for any of these solutions and hence postulating an underlying /l/ is also possible; it is possible but far from overwhelming as it covers four or five morphemes in all. It would appear that a concrete analysis could be slightly strengthened by considerations of words mentioned in ftn. 7 above, i.e. contrasts such as *stal* 'he stood' — *stal* 'steel'. On closer scrutiny, however, the initial appeal vanishes into thin air. Pairs such as

lup 'booty' — *lub* 'or'
dal 'he gave' — *dal* 'distance'
szal 'rage' — *szal* 'scarf'
pudel 'box, gen. pl.' — *pudel* 'poodle'
wal 'ridge' — *wal* 'strike, imperative sg.'

are, of course, non-repetitions and must be distinct phonologically. It does not follow, however, that phonological distinctness must be identified with the nature of phonetic contrast. In fact, there is ample evidence that this is not the case and that phonetic contrast [w — l] derives from the underlying contrast between the velarised lateral and the velarised lateral followed by a palatal semivowel, i.e. /l—lj/.

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[11] The tense /e/ refers to the /e/ vowel which alternates with /a/; details see Laskowski (1975 : 73 ff).

[12] The latter suggestion is not at all far-fetched as it appears supported by the total absence of the phonetic [lj] clusters. The solution we postulate below explains this mysterious gap in distribution as well.

As mentioned above, there are several palatalisations in Polish whose outputs in some cases are neutralised while in others they are kept distinct. One of them is the *j*-palatalisation (Gussmann 1973) which features prominently in several verbal groups where *-j-* appears as part of the thematic suffix. As a diagnostic context we shall consider a class of derived imperfectives based on stems ending in a dental stop which becomes an affricate by the *j*-palatalisation:

swoboda 'liberty' — *oswobadzać* 'set free'
zgoda 'consent' — *zgadzać* 'agree'
zdrada 'betrayal' — *zdradzać* 'betray'
kwiat 'flower' — *ukwiecać* 'adorn with flowers'
kształt 'shape' — *przekształcać* 'transform'
rzut 'thrust' — *rzucać* 'id. vb.'

Stems ending in /l/ when forming the base of a derived imperfective invariably change the /l/ into [l]:

caly 'whole' — *ocalać* 'save'
szkola 'school' — *przeszkalać* 'train'
uchwala 'resolution' — *uchwalać* 'pass a resolution'
nieśmialy 'shy' — *onieśmielać* 'make shy'
cialo 'body' — *wcielać* 'embody'
udzial 'share' — *udzielać* 'grant'
wesoly 'merry' — *rozweselać* 'make merry'
skrzydlo 'wing' — *uskrzydlać* 'lend wings'
widly 'garden fork' — *rozwidlać* 'fork, vb.'
wystrzal 'shot' — *wystrzelać* 'shoot'

There are several dozen verbs like that all showing that the phonetic [l] can derive from underlying (or intermediate) /lj/. To strengthen the case even further we note that there are a few instances of alternations also involving the word final [l] and [w]:

żal 'sorrow' — *żalować* 'regret'
przyjaciel 'he-friend' — *przyjaciółka* 'she-friend'
kaszel 'cough' — *kaslać* 'id. vb.'
piszczel 'tibia' — *piszczalka* 'fife'
narośl 'excrescence' — *rósl* 'he grew'
myśl 'thought' — *pomysl* 'idea'

What these groups of examples conclusively show is that also word final [l] must be derived from underlying /l/ plus a palatal glide. Naturally we have not got an alternation in every case but a requirement of this sort is unnecessary as firstly, accidental gaps in the lexicon would be raised to the same status as systematic gaps and secondly, it would deny the existence of language system by restricting regularities to the actually observed facts. Either of these assumptions is damaging and it would turn phonology into a summary of data and phonological representations would, to all intents and purposes, become indistinct from phonetic representations.[13] Naturally none of the problems discussed above could be handled if similar restrictions were to be imposed. From what we have seen, it is evident that the lateral [ɫ] and the semivowel [w] in native Polish vocabulary, no matter whether they are directly involved in alternations, indirectly involved (i.e. *las* — *lesie*) or not involved at all, should in all cases be derived from underlying /ɫ/. The existence of variation strongly supports parts of our argument, i.e. those referring to the feature composition of the underlying element. We must stress, however, that facts of variation do not help one way or the other in solving the remaining problems of abstractness posed by our data as the relevant facts are basically the same in all styles of speech. Hence, in this particular example, the variation data make only a fairly insignificant contribution to the structure of phonological argumentation. As usual in the case of a complex situation, one has to build on a combination of theoretical assumptions of varying degrees of reliability and language-internal or structural arguments; contributions from without tend to be either insignificant or of dubious value.[14]

Our second example is slightly more subtle and less obvious. It concerns the velar spirant(s) in Polish. As is well-known, there is basically[15] only the voiceless velar spirant [x] in the pronunciation of the majority of Poles. However, in a way similar to the mode of existence of the phonetic velarised lateral [ɫ], there is also the voiced velar spirant [γ] occurring in the speech of older people, coming mostly from Polish eastern territories, dialectally and in some styles. In the same sense as before then, [γ] is a vanishing sound in Polish. We shall first consider those lects where the two velar sounds are kept distinct phonetically and then the case where they merge into the voiceless spirant.

The first thing to be noted about [γ] and [x] is that their status within Polish is not equal. For one thing, the voiced spirant is much less frequent in its occurrence and in a number of cases it appears in words which are strongly foreign (including proper names) as in group A below. In group B we present a list of words where there is no compelling synchronic reason to treat them as foreign[16] although they still contain the voiced velar spirant.

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[13] This is indeed what the self-styled 'natural' generative phonology appears to be heading for. Vennemann (1974 : 346f) proudly announces that his approach does away with nonuniqueness, abstractness, absolute neutralisation, rule order, functional explanations and a couple of other major difficulties of the classical theory. One of the dramatic results of this spectacular simplification of the phonological apparatus is aspiration appearing in Vennemann's underlying representations (e.g. 1974 : 359). Few things could prove better than this how fundamentally misconceived his approach is. Anderson (1975) criticises the bases of Vennemann's conception of phonological structure.

[14] This point can hardly be overemphasised in view of the fact that much of recent work in the sphere of experimental phonology has been remarkably shallow and simplified (see the critical remarks by Kiparsky (1973 : 101 - 2) and Fischer-Jorgensen (1975b)).

[15] With qualifications to follow, ftn. 21.

A. *handlować* 'trade'
mahoń 'mahogany'
hippika 'horse-riding'
habanera 'habanera'
historia 'history'
wehikuł 'vehicle'
harfa 'harp'
maharadża 'maharajah'
honor 'honour'
habit 'monk's frock'
druh 'boy scout'
wataha 'band'
juhas 'shephard boy'
Sanhedryn
Sahara
Alhambra

B. *błahy* 'trivial'
ohyda 'disgust'
huk 'racket'
hak 'peg'
hałas 'noise'
hartować 'temper'
hojny 'generous'
hodować 'grow'
hulać 'revel'
hamować 'brake'
wahać się 'hesitate'
wahadło 'pendulum'
haftować 'embroider'

The voiceless spirant on the other hand is very general and characteristic of predominantly native words (A), although its occurrence in foreign words is not exceptional (B):

A. *chwila* 'moment'
chrząszcz 'cockchafter'
chwytać 'grasp'
chytry 'cunning'
chrzan 'horse-raddish'
choć 'although'
chodzić 'go'
chmura 'cloud'
chleb 'bread'
zmierzch 'dusk'
oddychać 'breathe'
orzech 'nut'
kichać 'sneeze'
śmiech 'laughter'
choroba 'illness'
chłodny 'cool'
chcieć 'want'

B. *chronograf* 'chronograph'
chorał 'chorale'
chlor 'chlorine'
alchemia 'alchemy'
chemia 'chemistry'
chimera 'chimera'
chinina 'quinine'
chaos 'chaos'
koncha 'conch'
monarcha 'monarch'
moloch 'Juggernaut'

The most essential difference between the two spirants lies in the fact that while the voiceless one is involved in processes of palatalisations resulting in numerous [x - š] alternations in a great number of contexts, the alternations involving the voiced spirant can be enumerated in full:

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[16] Observe that there are very few verbs in these groups.

druh 'boy scout' — *drużek* 'girl scout, gen pl. — *drużyna* 'team'
Sapieha 'proper name' — *Sapieże* 'id. dat. sg.' — *Sapieżanka* 'id. fem.'
wataha 'Cossack band' — *wataże*[17] 'id. dat. sg.' — *watażek* 'band leader, gen. pl.'

One might entertain the idea that in the lect under discussion [ɣ] and [x] are realisations of the same underlying segment and that voiced spirant is introduced by a (minor) rule which, in the following discussion will be called the 'voicing rule' for short. Another possibility is, of course, that both voiced and voiceless spirants appear underlyingly. One argument in favour of the rule solution is the extremely limited distribution of the voiced spirant, which stands out in sharp opposition to the voice contrast existing among obstruents in Polish. Observe that there are very few clusters involving the voiced spirants as against the voiceless one thus suggesting that the voiced segment is not a freely occurring one. This, of course, puts its phonological independence in doubt. The restricted distribution of the segment would also be responsible for the fact that it does not appear in contexts where the rules of palatalisations apply thus failing to produce more phonetic alternations than those illustrated above. If it does appear in appropriate contexts, the few alternations follow automatically. A disadvantage connected with this solution is that morphemes would have to be marked individually for their applicability to the voicing rule[18] as it could not be restricted to foreign words may have voiceless spirants, nor could it be stated in purely phonological terms.[19] A minor point in favour of the underlying distinction is that the phonological system becomes more regularised as the velar consonants would now involve a full exploitation of the two way distinction into (±continuant) and (±voice). This weak advantage appears clearly outbalanced by the distributional irregularities mentioned above. Thus we conclude that the synchronic evidence appears to favour the voicing rule solution as against one involving underlying distinctions for the speech of those who maintain a voice contrast with velar spirants.

As mentioned above there is no phonetic difference in voice with velar spirants for the majority of Polish speakers today. On the other hand, the alternations mentioned on p. 56 are all preserved everywhere intact. So, in general Polish, we find phonetic alternations [x - š] and [x - ž] corresponding to the alternations [x - š] and [γ - ž] in the lects discussed above.

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[17] Also *watadze* as if derived from underlying /g/.

[18] The rule would have to apply early in the grammar (perhaps as a readjustment rule) in order to feed velar palatalisations.

[19] Naturally one might resort to diacritic marks, something like /+Slavic/ and/or /+Polish/ but as the assignment of a morpheme to a given category would have to be arbitrary, this sort of solution merely disguises the issue.

We must now inquire into the phonological rules and representations for this dialect. On the basis of the available evidence nothing favours a voice contrast underlying the velar spirant. Evidence of three alternating morphemes is as irrelevant to the establishment of an underlying contrast as the evidence of three morphemes can be used to contradict an otherwise well-motivated analysis (cp. the [l — w] pairs discussed above). As a result, we have to treat these three morphemes as irregular and we further suggest that (γ) appears at no stage in deep Polish phonology. This we do with regret because 1) the actual alternations are perfectly regular — within the structure of Polish (γ) should palatalise to [ž] in those cases where e.g. [x] palatalises to [š]; in this way the alternations are regarded as irregular (NOT suppletive) but showing extremely low lexical frequency;[20] 2) the existence of lects with voiced velar spirants must be seen as having no influence on the grammar of general Polish. In other words, we have to assume that speakers of general Polish in some way ignore the voice distinction with velar spirants as they obviously encounter no difficulties in understanding speakers who make this distinction. The difference between the dialects would then be reduced to the presence vs. absence of a rule.[21]

This being the case, the existence of variation has nothing to say about the grammar of speakers who do not make the difference in question. We conclude that if language internal evidence for rules and representations is weak, the presence of variation cannot by itself decisively affect them.

Our final example illustrating some of the possibilities and limitations of the influence of the existing variation on phonological descriptions and general theory concerns the treatment of preconsonantal and word final *r*'s in an r-less dialect of English, such as RP. The problem we want to address ourselves to is again the same as before: what is the structural and variational evidence for a particular analysis? Within RP [*r*] occurs only prevocalically[22] thus exhibiting again an extremely limited distribution and again being suggestive of a phonological patterning differing from the phonetic one.[23] There are some well-known instances of alternations which motivate the monophthongal interpretation of English vocalic nuclei. In the context of [r] we can note the following examples:

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[20] We must note, however, that even very low lexical frequency of some phenomenon does not necessarily mean that the process underlying it is a figment of a linguist's imagination. As a case in point, consider the voiced velar spirant [γ] which is a result of low phonetic regressive voice assimilation (Wierzchowska 1971 : 71; Rubach 1974). There appear to be only two words exhibiting this process: *klechda* 'ancient tale' and the synchronically foreign Christian name *Bohdan* (its native equivalent being *Bogdan*). Apart from that, the rule applies across word boundaries and this admits a lot of variation depending upon the tempo of speech and other incidental factors. In spite of the extreme lack of lexical support, the rule is absolutely uncontroversial; its failure to produce more reflexes is simply due to there being no clusters of [x] plus a voiced obstruent.

[21] Let us observe that the change from lects with the voicing rule to general Polish involves a loss of a rule and removal of diacritic features on individual morphemes.

rare — rarity
clear — clarity
severe — severity
superior — superiority
sonorous — sonority
bar — barrier
car — carrier
declare — declarative
compare — comparative
prepare — preparative

Although the list could be extended, i.e. the examples presented above are not isolated in the language (Chomsky and Halle 1968; Hoard 1972), the processes deriving complex vocalic nuclei from underlying simple ones characteristically involve grammatical boundaries We know of no morpheme internal alternations, i.e. ones with final segment(s) neutral. In effect, although there are derivations justified on the basis of morphological alternations, we also have hundreds of morphemes which appear in constant shape in the language. Thus side by side with the alternating *car* and *bar* we have non-alternating *card* and *bark* and the question now arises as to how we should represent the second pair of words phonologically. One obvious possibility is to represent the non-alternating forms in their more or less phonetic shape in accordance with several versions of concrete phonology (cp. also Wang 1973:115), i.e. *car* and *bar* would be represented lexically as [kar] and [bar respectively, while *card* and *bark* would be [kad] and [bak] underlying; the the second solution is to represent the morphemes as [kar], [bar], [kard],

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[22] This refers to the so-called linking and intrusive *r*. In agreement with the traditional approach we believe that the linking *r* is simply the non-deleted *r*, while the intrusive one is due to epenthesis working under special phonological and sociolinguistic conditions. See, however, Johansson (1974) where a (particularly weak, in our opinion) case is made for epenthesis in both instances.

[23] In the course of the discussion we have relied several times on distributional arguments which are usually viewed as of sedondary importance. It is perhaps worth noting in this connection that about a century ago, Kruszewski (1881 in 1967 : 29) evidently regarded distributional arguments of equal or greater value than alternation arguments: as a first example of a class of what he regarded as a completely productive and phonetically conditioned process he gave the case of the voicing of the initial and intervocalic /s/ in German, where no morphological alternations are ever involved.

(bark) and apply the same rules to all of them. The former solution would require a complete reshuffle of the underlying system of English vowels which, despite the difficulties it is beset by, appears in parts well motivated (Hoard 1972) or alternatively, were we to uphold the underlying inventory of vocalic segments then hundreds of morphemes would have to be marked as exempt from the operation of the major rules of English non-consonantal phonology (i.e. vowel-shift and the like). Either solution would increase considerably the complexity of the description and as such it is not particularly attractive. Simplicity arguments are no longer terribly attractive either but in this particular case they appear to support (or be supported by) at least two other types of consideration.[24] For one to sever an interpretation of words like *bark* from words like *bar* is, in effect, to deny the relevance of phonetic considerations in phonology which would supposedly have to be based on morphological data alone. We specifically argued against such a simplistic view of the working of phonology in language. The obvious phonetic similarity of the two words, with no evidence to the contrary, would suggest that they should be handled in the same way phonologically. This line of reasoning is nothing more than another way of saying that individual cases should be thrown into relief against the system of language (cp Fischer-Jørgensen 1975b).

We may appear to be belabouring this case as, in fact, no one, to our knowledge, has suggested that a morpheme like *part* should have a phonological C_1VC_1 structure. This may be partly due to the fact that most work on the phonology of English has been based on American data but we believe that mostly because the adoption of some version of concrete phonology with its apartheid policy segregation alternating and non-alternating morphemes would produce tangibly counterintuitive results. The basis for this feeling is, of course, the existence of numerous dialects of English where preconsonantal *r*'s actually appear phonetically. To all intents and purposes, the *r*-less speakers of English are, mathematically speaking, in the minority. It is probably not too far fetched to say that forms such as (bɑk) have not appeared in the literature not because of the existence of structural arguments involving — which are not overwhelming in any case — but precisely because speakers of r-less dialects have to accomodate the *r*-full type of pronunciation in their competence. (In this case it is, most often, a fully conscious knowledge). The obvious solution to adopt is to take the facts of variation as reinforcing the structural evidence and consequently posit underlying (r) preconsonantally as well as rules that lengthen the vowels and delete (r) in appropriate contexts. The alternative solution where, apart from the complication of the grammar, the speaker in every instance like *bark* would have to learn two underlying forms, one *r*-less for his own speech and another with *r*, without at the same time capturing the basic and recurrent phonological relatedness between them, becomes ludicrous.

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[24] For a careful evaluation of the concept of simplicity and its possible link with other aspects of phonological structure, see Anderson (1974 : 77ff).

We have considered arguments for phonological abstractness in connection with the existence of speech variation. The assumption underlying speech variation has naturally been that the speaker of one dialect is capable of understanding quite a lot of what he himself never actually produces be it other dialects, styles and other leets such as, e.g. the strongly marked speech of a foreigner where the difference cover not only details but may involve considerable modifications and/or distortions when compared with his own speech: consequently he must have at his disposal means of achieving this purpose. More abstract underlying representations and a more complex set of phonological rules appear to describe these facts better than a concept of, say some storage procedure as most, if not all, of the observed speech variation (and here the Polish velar spirants constitute an interesting exception) must be derived from the same underlying forms (Similar lines of reasoning have been adopted by Nessley 1973; Hoard and Sloat 1973). The existing variation sometimes enforces considerably abstract forms which, in the examples we have examined, may be interpreted as reinforcing the structural evidence. In this way the existence of linguistic variation strengthens the case for abstract phonology. The aspects of abstractness where we have found support from variation comprise cases a) where the feature composition of an underlying segment is modified beyond articulatory (though perhaps not acoustic) recognition — Polish [ł]; b) where segmental composition of a morpheme differs from its phonetic form in the sense that some phonological segment never emerges phonetically in that morpheme (thus violating both segment paradigm condition and feature paradigm condition discussed by Jensen 1974 and also Kiparsky's strictures) — the RP preconsonantal [r]. The existence of variation may be indicative of other aspects of phonology which cannot be decided on the basis of monolithic evidence — rules and representations in the case of the Polish [γ - x] distinction.

We must observe, however, that recourse to speech variation as a means of justifying abstract representations is an extremely dangerous procedure as one may easily misuse it. The case we have considered above seem to us to be fairly uncontroversial but numerous less obvious instances easily come to mind. To mention just one: there are dialects of English where the initial semivowels in *which* and *witch* contrast. Should this fact be regarded as relevant for a grammar of a speaker who makes no such distinction? If not, then how are we to account for this interpretation of the phonetic difference in the speech of others? (cp. also the case of the Polish velar spirants.). We may guess that there exist some restrictions on phenomena which should be included into phonological competence as its true part while others simply have to be learnt (stored) or learnt to disregard individually. But we have nothing to offer by way of supporting such a hypothesis which must remain a guess. The issue as to what facts must be taken into account while constructing a realistic model of phonological competence comprising also speech variation is in essence not very much different from the question of morpheme relatedness in a monolithic grammar: there is nothing to decide in advance which facts should be taken into account and which ones should be left out. Relying on one's intuition and general concepts as to what is productive will not take us very far as very often scholars will recognise as related those facts which support their major thesis or theory; Derwing's (1973:122 ff) rejection of synchronic relationship between forms such as *reciprocal — reciprocity various — variety* constituents one extreme while Lightner's (1975) conviction as to necessity of relating synchronically such pairs as *dual — two, pregnant — kindergarten* reaches the other end. Facts of speech variation just as much as any other facts must be looked for and sifted with extreme caution: no operational procedure can be given once and for all.

Finally we would like to stress that the frequently voiced call for a more realistic model of language acquisition is, in any case, tantamount to the need for broadening the scope of competence. We have tried to indicate some of the ways where phonological competence appears to be in need of extension.

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CONTRASTIVE PHONOSTYLISTICS

JERZY RUBACH

University of Warsaw

The aim of this paper is firstly to show rule relatedness and to give further illustration and substance to the assertions made by Gussmann (1975) and Fisiak (1975) that rules can be pronounced similar if they converge in both their formal shape and their order and depth of application and secondly to examine some pedagogical implications of contrastive phonostylistic analyses.

Generative phonological rules are typically in the form:

$$X \rightarrow Y \text{ in environ. } Z$$

Therefore, rules which are similar should converge in the three component parts of a phonological statement: input, output and environment.

Input convergence seems to be most straightforward. The class of segments undergoing the rule is defined in terms of universal distinctive features, consequently a comparison should be obvious. But even in such cases one has to be cautious in making statements of identity. The specification $\begin{bmatrix} -\text{contin} \\ +\text{del rel} \end{bmatrix}$ denotes the class of affricates. However, if it is an English rule the class membership will be different at different depths of a derivation. In the case of a deep phonological rule the input will include only |č| and |ǰ|. If, however, the rule applies late then its input will additionally cover |tr| and |dr|. More accurately, the scope of the above given specification depends on whether the low phonetic affrication rule turning the sequences of a dental stop and |r| into affricates has already applied or not. The need for such a rule is justified on several independent grounds: dental stop deletion, unvoicing and glottalization (cf. Rubach 1974). Quite obviously this kind of reasoning applies not only to inputs but also to other parts of phonological rules. The point of the above discussion is clear: it does not suffice to look only at distinctive features and the classes which they define — in deciding about the scope of rules one has to go beyond purely formal comparisons and consider the effects of other rules.

Convergence in the output might seem to be reduced to the taxonomic procedures of comparing inventories of phonetic segments. Let us discuss here a few examples at some length. Surprising as it may appear, the following three statements are true assertions about the phonology of English and Polish:

(1) Voiceless stops are aspirated when prevocalic in the stressed syllable-initial position;

(2) Vowels are nasalized in nasal contexts;

(3) [š, ž] appear in both languages in the context of [č, j, š, ž]

Let us verify the validity of each of these statements by considering the rules which produce the outputs in question.

English has the following prevocalic aspiration rule:

$$(4)\quad \begin{bmatrix} -\text{contin} \\ -\text{del rel} \\ -\text{voiced} \end{bmatrix} \rightarrow [+\text{aspirated}] / \begin{Bmatrix} \# \\ [-\text{strid}] \end{Bmatrix} - \begin{bmatrix} \text{V} \\ +\text{stress} \end{bmatrix}$$

Rule (4) accounts for phonetic variants of /p, t, k/ in *pose*, *impose*, *tend*, *intend*, *obtain*, *car*, *incur*, etc. The [—strid] specification correctly excludes *spot*, *stop*, *sky* (also *suspect*, *discuss*, etc. — after Gimson 1971:152) from the domain of (4). Although little is known about phonetic variation in Polish in this respect, there is no question that aspirated stops *may* occur in *panie* ("sir"), *taka ryba* ("such a fish"), *ale kiedy to zrobisz?* ("but when will you do it?") The rule is identical to (4) (perhaps with the exception of nonstrident restriction). Thus the requirement of formal similarity is ideally fulfilled. Are the rules similar then? The answer is negative: they are not. The fundamental difference lies not so much in the depth of rules (both are purely phonetic) as in their rank: the English rule is obligatory (a well-formedness condition), the Polish rule in phonostylistic with a heavy marking for highly emotional speech. Thus the statement made in (1) (output convergence) reveals only a fraction of the truth.

British English is normally described as having virtually no nasalization of vowels. This description is true but only when we disregard phonostylistic variation. It has been found instrumentally (William Ewan carried out some experiments for me at the University of California at Berkley) that vowels are heavily nasalized in rapid speech pronunciations of the final syllables in *agreement*, *improvement*, *component* etc. The rule seems to be limited to unstressed vowels appearing in the bilateral context of nasals:

$$(5)\quad \begin{bmatrix} \text{V} \\ -\text{stress} \end{bmatrix} \rightarrow [+\text{nas}] / [+\text{nas}] - [+\text{nas}]$$

Rule (5) is clearly phonostylistic. Therefore in order to avoid the mistake made previously, let us look for a Polish rule which would also be of a phonostylistic nature. The rule is not difficult to find:

$$(6)\quad V \rightarrow [+\text{nas}] / - \begin{bmatrix} -\text{cons} \\ -\text{syll} \\ +\text{nas} \end{bmatrix} \#$$

Rule (6) accounts for phonostylistic variation of [ow̃] : [õw̃] and [ew̃] : [ẽw̃] in *niosą* ("they carry"), *nogą* ("leg" — instr.), *ręką* ("hand" — instr.), *niosę* ("I carry"), *nogę* ("leg" — acc.), *rękę* ("hand" — acc.), etc.[1] Rules (5) and (6) are similar in rank, consequently one should only worry, it seems, about their incomplete formal similarity. Here is another pitfall. If formal incompleteness were the only difference in phonostylistic nasalization in English and Polish then why would Poles commonly mispronounce *pence, difference, evidence* etc. as [pẽw̃s], [difərẽw̃s], [evidẽw̃s] (in spite of the fact that /Vns/ sequences in Polish are pronounced as such in many cases in slow speech) yet correctly produce *mission, button, bacon*, etc.? The answer is fairly complicated. Vowel nasalization is in most contexts obligatory for a vast majority of speakers of cultural Polish. If we want to contrast rule (5) with a comparable rule of a similar phonostylistic standing in Polish we should look not at vowel nasalization itself but rather at the phonostylistic rule of gliding. The relevant part of the phonostylistic gliding rule takes the form of (7) (for a complete version of this rule see Rubach, 1974):

$$(7)\quad \begin{bmatrix} +\text{nas} \\ +\text{coron} \\ +\text{anter} \end{bmatrix} \rightarrow \begin{bmatrix} -\text{cons} \\ -\text{syll} \\ +\text{back} \end{bmatrix} / V - \begin{bmatrix} +\text{obstr} \\ +\text{contin} \end{bmatrix}$$

Let us note that the rule is very productive and its conditioning is entirely phonetic. As it stands, (7) changes [n] to [w̃] in causal and/or rapid speech, viz. *szansa* ("chance"), *awans* ("promotion"), *sanskryt* ("Sanskrit"), *czynsz* ("rent"), *instynkt* ("instinct"), *precedens* ("precedence"), *konstrukcja* ("construction"), *informacja* ("information"), etc. Once this change has taken place then an *obligatory* rule of nasalization applies giving a nasal quality to the preceding vowel. The obligatory vowel nasalization has the shape of (8):

$$(8)\quad V \rightarrow [+\text{nas}] / - \begin{bmatrix} -\text{cons} \\ -\text{syll} \\ +\text{nas} \end{bmatrix} C$$

Note that the requirement of a following consonant differentiates (8) from phonostylistic rule (6). A few sample derivations should clarify this complicated situation:

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[1] The data come from Zagórska (1968).

	awans	*precedens*	*czynsz*	
Slow speech:	—vans	—dens	čins̆	
Casual	vaw̃s	dew̃s	čiw̃š	Rule (7) — phonostylistic
speech	vãw̃s	dẽw̃s	čĩw̃š	Rule (8) — obligatory

Now it becomes evident that English phonostylistic vowel nasalization corresponds as a type of process to three Polish rules: (6), (7), (8) out of which one is obligatory and one bears no formal resemblance to English rule (5) at all. In other words, although speaking in general terms we have equivalence of process there is only partial equivalence in rank and form.

The statement made in point three requires considerably more attention. English phonostylistics has a rule of strident assimilations:

$$(9)\quad \begin{bmatrix} +\text{strid} \\ +\text{coron} \\ +\text{anter} \end{bmatrix} \rightarrow \begin{bmatrix} -\text{anter} \\ +\text{distrib} \end{bmatrix} \;/\!-\!([-\text{seg}])\; \begin{bmatrix} +\text{strid} \\ -\text{anter} \\ \langle +\text{cont} \rangle \end{bmatrix}$$

The rule changes [s, z] to [š, ž] in casual and/or rapid speech:

a) *Christian, question, suggestion, digestion, congestion;*

b) ***apprenticeship, Peebleshire, Inverness-shire, case-shot, missahpen, news-sheet, balancesheet, this ship.***

The assimilation here is not only in anteriority but also in the feature [distributed]. All palato-alveolars, i.e. the conditioning environment in (9), are [+distrib], hence the assimilated [s, z] acquire this property as well. This is important since [s, z] may sometimes assimilate only in anteriority remaining nondistributed, cf. postalveolar [s, z] *newsreel, horse-riding, grocery.*[2]

Polish has a similar phonostylistic rule of strident assimilation. The following data should be brought into consideration:

A. Dental stops are replaced by affricates whose place of articulation is determined by the consonant which follows. Thus we get:
   a) alveolar [c, dz] before [c, dz, s, z]: *odcedzić* ("drain away"), *oddzwonić* ("call back"), *dowódca* ("commander"), *radca* ("adviser"), *od soboty* ("since Saturday"), *od zaraz* ("right away"), *odznaka* ("badge");
   b) postalveolar [š, ǰ] before [č, ǰ, š, ž]: *doświadczony* ("experienced"), *Irlandczyk* ("Irishman"), *od czasu do czasu* ("from time to time"), *brat Chilijczyka* ("the brother of the Chilean"), *pod drzewem* ("under the tree"), *trzeba* ("ought to"), *drzwi* ("door"), *budżet* ("budget");

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[2] The rule of [s, z] retraction before [r] should be collapsed with (9) by attaching a variable to [distrib]. Here it has not been done because it is irrelevant to our discussion.

c) alveolo-palatal [ć, dź] before [ć, dź, ś, ź]: *odcinać* ("cut off"), *brat cię lubi* ("my brother likes you"), *odsiać* ("to sift"), *nad ziemią* ("over the earth").

B. There are similar changes of [s, z]:

a) to postalveolar [š, ž] before [š, ž, č, ǰ]: *zszarzeć* ("to become grey"), *zżółknąć* ("to become yellow"), *zczerwienieć* ("to become red"), *zdrzemnąć się* ("to take a nap"), *obraz rzeki* ("a picture of the river");

b) to alveolo-palatal [ś, ź] before [ś, ź, ć, dź]: *zsiąść* ("dismount"), *bez siły* ("without strength"), *podczas sierpnia* ("in August"), *przez zimę* ("over the winter"), *zdziwić się* ("to be surprised"), *przez dzień* ("in a day").

C. Along the same lines the alveolar affricates [c, dz] assimilate to:

a) [č, ǰ]: *Płocczanin* ("inhabitant of Płock"), *staroświecczyzna* ("old-fashionedness"), *pałac czarny* ("black palace"), *wieniec szary* ("grey wreath"), *pobiec szybko* ("run quickly");

b) [ć, dź]: *w occie* ("in vinegar"), *upiec ciasto* ("bake a cake"), *goniec dzisiaj* ("the runner... today"), *nic się nie da zrobić* ("one can't help it").

The above examples show that assimilation takes place before strident coronals (i.e. not [f, v]) and may apply both within words and across word boundaries of all types. Stated formally the rule has the following shape:

$$(10)\quad \begin{bmatrix} +\text{obstr} \\ +\text{coron} \\ +\text{anter} \end{bmatrix} \rightarrow \begin{bmatrix} +\text{strid} \\ \alpha\text{anter} \\ \beta\text{distrib} \end{bmatrix} / \_\_ ([-\text{seg}]) \begin{bmatrix} +\text{strid} \\ +\text{coron} \\ \alpha\ \text{anter} \\ \beta\,\text{distrib} \end{bmatrix}$$

A few points call for clarification. The feature [±anter] divides coronals into two groups: dentals and alveolars are anterior, postalveolars and alveolo-palatals are nonanterior. The feature [±distrib] is taken as a relative one: it provides distinctions within the anterior and the nonanterior region separately. In the former it distinguishes dentals (nondistributed) from alveolars (distributed), in the latter postalveolars from alveolo-palatals (these, additionally, are always [+high]). A sample derivation for *magistrze* ("M. A." — voc.) illustrates the operation of (10):

Slow speech form:	—stše	
Casual speech forms:	sčše	Rule (10)
	ščše	Rule (10)

Now let us try to compare rules (9) and (10). They are equivalent in rank as they have a phonostylistic status. The inputs are different: in rule (10) — all dental obstruents, in (9) — only [s, z]. Consequently, if we want to talk about equivalence holding between the rules we can only consider the fricative inputs. This restriction brings the environmental conditionings of (9) and (10) much closer together. It is true that the changes of [s, z] in Polish take place only before nonanteriors (postalveolars and alveolo-palatals). The coronality restriction in the environment of (10) corresponds to the phonotactic restrictions of (9): [+coron] need not be included in (9) since all nonanterior stridents are [+coron]. This fact confirms our earlier statement that in order to adequetely compare two rules from the formal point of view, it is not sufficient to confine oneself to procedures like feature count. Although given these considerations the similarity of phonostylistic [s, z] changes in English and Polish is much more evident, it would be premature to make statements of equivalence. Firstly, the restrictions in the comparison made above do not cancel some other formal differences between (9) and (10). Rule (9) can apply across boundaries only if the conditioning segment is a continuant, i.e., it applies to *this shop* but not to *this church*. This is not true rule (10). Secondly, although there is no difference in the status ,of the rules (both are phonostylistic), there are differences in rule relatedness. In English stridency assimilation is a purely phonostylistic process (i.e. a new rule), in Polish the relevant rule is a reflex of the obligatory phonological rule which operates within words,[3] viz. *jazda* — *jeździe* ("journey" — nom., dat.), *gwizd* — *gwiżdżę* ("whistle", "I whistle"), *list* — *liście* ("letter" — nom., loc.), *trzask* — *trzeszczy* ("a crack", "it cracks"). This fact seems to explain why Poles use the assimilated forms of dental — strident combinations in all styles of speech except very careful and monitored pronunciation (English stridency assimilation seems to require a higher degree of casualness).

Our discussion above has already touched on several points referring to considerations of environment convergance. To give more substance to this issue let us mention a case of environmental overlap. In English there is an obligatory rule of syllabicity — imposing and it has the form of (11).

$$(11)\quad \begin{bmatrix} +\text{sonor} \\ +\text{cons} \end{bmatrix} \rightarrow [+\text{syll}] / [+\text{obstr}] \,\_\, \begin{Bmatrix} C \\ \# \end{Bmatrix}$$

Rule (11) accounts for syllabic resonants in *little*, *people*, *muscle*, *fickle*, *castle*, *cycle*, *spectacle* where the context is that of an obstruent and an external word boundary, and also in *simpleton*, etc. where the right hand environment is a consonant. If the required word boundary is of an internal type, rule (11) applies but its effect may be undone by a phonostylistic syllabicity — releasing rule (cf. Rubach 1974): *bottling*, *wrestler*, *settling*, etc. The left hand environment of an obstruent is motivated by the lack of syllabic consonants in *film*, *kiln*, *helm*, etc.

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[3] There are exceptions like *Zdzisław* (a name). They become regularized in casual and/or rapid speech, i.e. due to the operation of rule (10).

Now let us look at two rules of sonorant unvoicing in Polish. Liquids are obligatorily unvoiced in the context between voiceless obstruents:

$$(12)\quad \begin{bmatrix} -\text{syll} \\ +\text{sonor} \\ -\text{nas} \end{bmatrix} \rightarrow [\text{-voiced}]/[\text{-voiced}] - [\text{-voiced}]$$

The examples are: [r] *Piotrków* (a name), *Piotrka* ("Peter" — gen.), [w] *upiekłszy* ("having baked"), *rzekłszy* ("having said"), *płci* ("sex" — gen.) where the phonetic [w] is derived from the underlying back lateral /ł/. Rule (12) does not apply to nasals, viz. *czosnku*, *pierwiosnka* ("garlic", "primrose" — gen.) which may become voiceless but only in casual and/or rapid speech. In other words, there is a phonostylistic rule of unvoicing which corresponds to (12) and accounts for voiceless sonorants in:

a) *czosnku*, *piosnka* ("song"), *rzemieślnik* ("craftsman"), *umyślnie* ("purposefully"), etc.

b) *pieśń* ("song"), *pleśń* ("mould"), *pism*, *pasm* ("journals", "stripes" — gen.), *spektakl* ("spectacle"), *myśl* ("thought"), *wiatr* ("wind"), *łotr* ("rascal"), *umysł* ("mind"), *upiekł* ("he baked") etc.

The phonostylistic rule in question is (13):[4]

$$(13)\quad \begin{bmatrix} -\text{syll} \\ -\text{obstr} \end{bmatrix} \rightarrow [-\text{voiced}]/[-\text{voiced}] - \begin{Bmatrix} C \\ \# \end{Bmatrix}$$

Now let us look back at rule (11). There is no doubt that the English and the Polish rules represent entirely different processes — syllabicity-imposing and sonorant unvoicing. This, however, does not mean that the rules are not formally similar: we have an almost complete overlap of environment. In the Polish rules the left hand specification of [-voiced] can only refer to obstruents, hence we have a direct correspondence of the left environment. There is one difference: the English rule would also permit voiced obstruents as an environment (cf. syllabic consonants in *syllable*, *handle*, *puzzle*, *strangle*, *handling*, etc.), the Polish rules exclude such a possibility. The correspondence of the right hand environment is evident: in (11) and (12) the equivalence is partial and holds only in one subcase — that of a consonant (in the English rule there could be any consonant, in the Polish rule it must be a voiceless obstruent), in (11) and (13) the equivalence is complete. The comparison of the above rules and the fact that they show a considerable overlap in environments explains why Poles mispronounce words like *simple*, *simpleton*, *battle*, etc — they replace the syllabic and only partly unvoiced [l] by the nonsyllabic and completely voiceless [l]. There is still one more fact of phonological interference which the above discussion has not clarified. It often happens (though less frequently than with *simple*, etc.) that *syllable*, *puzzle*, *handle* are also realized as sequences of voiceless obstruents and unvoiced sonorants: [siləpl] etc. In order to clarify this point we have to consider yet another rule of phonostylistic unvoicing in Polish. Obstruent unvoicing may, as it were, jump over a nonsyllabic sonorant:

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[4] Actually (13) is a mirror image rule: it applies also if the left and right environments are reversed, viz. *ziarnko* ("grain"), *rtęć* ("mercury"). We omit this fact and the % notation as not relevant to our discussion, see, however, Rubach (1974).

$$(14)\ [+\text{obstr}] \rightarrow [-\text{voiced}] / \text{—} \begin{bmatrix} +\text{sonor} \\ -\text{syll} \end{bmatrix} \begin{Bmatrix} \# \\ [-\text{voiced}] \\ +\text{mi} \end{Bmatrix}$$

Rule (14) operates in the context of:

a) a word boundary: *mógł* ("he could"), *zjadł* ("he has eaten"), *znalazł* ("he has found"), *kadr* ("staffs" — gen.), *módl* ("pray" — imp.), *żubr* ("bison"), *mechanizm* ("mechanism"), *przyjaźń* ("friendship"), *blizn* ("scars" — gen.)
b) a voiceless segment: *biegłszy* ("having run"), *mędrca* ("sage" — gen.), *Jędrka* ("Andy" — gen.)
c) the morpheme *my*: *módlmy się* ("let's pray").

In order to sum up our complicated discussion let us have a look at some sample derivations.

ENGLISH:

	little	*syllable*	
	/litl/	/silæbl/[5]	
Obligatory derivation	—	siləbl	V-reduction
	litl	siləbl	Rule (11)
	litl	—	Partial unvoicing
Phonostylistic derivation	none		

POLISH:

	spektakl	*namydl*	*Piotrka*	*Jędrka*	
	/—akl/	/—dl/	/—tr+ek+a/	/—ndr+ek+a/	
Obligatory derivation	—	—	tr+k+a	ndr+k+a	e-drop
	—	—	tr̥+k+a	—	Rule (12)
Phonostylistic derivation	—	tl	—	ntr+k+a	Rule (14)
	akl	tl	—	nti+k+a	Rule (13)

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[5] For the motivation of /æ/ cf. *syllabic*.

All our analyses have important pedagogical implications. These are basically of two types:

— One can make use of phonostylistic rules of the native language in teaching the obligatory rules of the target language. A case in point is the rule of aspiration in Polish and its obligatory status in English. The acquisition of aspiration by Poles learning English can be basically reduced to a change in rank: from phonostylistic to obligatory.

— In order to avoid nasalized pronunciations of words like *pence, performance*, etc. it is sufficient to block the application of phonostylistic gliding Once it has been done the application of the vowel nasalization rule will be automatically inhibited. In other words, we have to look for the rule which triggers the whole process and this is not necessarily the one which produces the final effect.

— A good contrastive comparison will enable us to make predictions about phonological interference. It is suggested that such interference is strongest in cases of environmental overlap. Thus for a Pole who knows the obligatory processes of English a derivation for words like *syllable* does not finish at the point where all the obligatory rules have been applied. He may extend it by applying phonostylistic rules of Polish phonology. The distinction between obligatory and the phonostylistic rank of rules permits us to predict that Poles will incorrectly unvoice the [l] of *simpleton* (if they do not insert a vowel, which is also incorrect) much more often than the [l] of *syllable* or even that of *simple* (cf. rules (12) and (13) along with (14)).

The above statements are valid only on the condition that an adequate comparison has been made between the rules of the two languages concerned. The analyses made in this paper show that such adequacy can be reached only if:

a) a distinction between obligatory and phonostylistic rules has been made, i.e., the rules are compared with full consideration of their rank;

b) the rules to be compared are considered not in isolation but within the framework of other rules, no matter whether these are ordered after or before the relevant rules. It has been shown that an adequate comparison of vowel nasalization in English and Polish must take into account a whole array of rules: placing two rules side by side, even with the rank equivalence satisfactorily fulfilled, reveals very little, if anything, about the actual similarity in linguistic mechanism;

c) the convergence of input, output, and environment is determined after a careful inspection of the actual (i.e. true for the moment when the rule applies) meaning of the feature specifications. The same features may denote different classes of segments depending on the depth at which the rule applies, i.e. depending on the effects of other rules which have already applied and the predictions of the effects of the rules which are to be applied later;

d) the correspondence in feature specifications is taken broadly and not narrowly from the formal point of view: [−voiced] in rule (12) corresponds in part to [+obstr] in rule (11) since it can only refer to voiceless obstruents at the depth at which the rule applies;

e) segment inventories are used only to check the scope of the class denoted by the feature specifications in the rules: coronal stridents in English are limited to six segments [s, z, š, č, ž, ǰ] while in Polish they include twelve segments [s, z, c, dz, š, ž, č, ǰ, ś, ź, ć, dź]. As has been shown by the analysis of the statements in (1), (2) and (3), comparing segment inventories by themselves with no reference to phonological rules may be highly misleading and of little use.

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SEMANTIC EQUIVALENCE AND STYLE

Nina Nowakowska

Adam Mickiewicz University, Poznań

The initial assumption of the present proposal is that of the superiority of generative theories over other linguistic models. I also believe that the choice of an adequate theory of language description provides the correct framework for contrastive analyses. However, it seems that very few of the existing generative grammars have aimed at descriptions which would reflect the full grammatical and semantic complexity of natural languages. In particular most of the grammars proposed so far have failed to account for the language of poetry.[1] To amend the situation it is necessary to reconsider the three definitional postulates accepted by the first authors of generative theory

1. the grammar is the theory of linguistic competence,
2. the grammatical rules consist in relating meanings to sounds,
3. the grammar is a mechanism of sentence generation.

This is not the proper place to attempt a full historical perspective.[2] It suffices to note that all the successive models proposed by Chomsky have been intended to describe utterances whose well-formedness does not exceed referential literalism. Most of the generative semanticists, on the contrary, keep to the assumption that all intentions governing language use should be formalized by the theory. The empirical superiority of the latter alternative seems to me unquestionable. Such choice, however, necessitates the acceptance of the postulates which although pertaining to the same superquestions of linguistic science, are substantially different in contents from those assumed by Chomsky.

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[1] Poetry is for me a two-way ambiguous term, roughly between 'aesthetic product' and 'metalingual potential'.

[2] For a review of generative grammars from the viewpoint of their applicability to the description of the poetic language see Nowakowska (1975).

First, the notion of competence must include the functional relevance of language of which it was unlawfully deprived by Chomsky.

Secondly, it seems most desirable to adopt the Hallidayan conception of meaning as indistinguishable from language functions, such as (a) ideational (referential) function, (b) interpersonal (modal) function, (c) informational (textual) function.

Thirdly, the linguistic structures of true significance in view of the above facts are texts rather than sentences.

Accordingly, the grammar must contain next to the formal components, such as the logical base and transformations, at least three semantic subcomponents, each responsible for providing a different type of semantic description, as well as a subcomponent that would take care of well-formedness assessment, e. g. relative to a given set of presuppositions. For the reasons made clear in Jackendoff (1972), I follow this author in rejecting the methodology of the isomorphic character of all semantic information, which is characteristic of the writings of the generative semanticists. Consequently the semantic subcomponents, constituting the interpretive part of the grammar, are each characterized by their specific formalism as well as by their distinct input structures of either purely formal or of syntacto-semantic quality.

As regards contrastive analyses, both of the current hypotheses seem to be tenable within the accepted framework, i.e., we may as well conceive of a contrastive grammar of Krzeszowski type, as of the grammars whose rules and output structures are to be confronted. In either case, however, it is obligatory to provide mechanisms for confronting all kinds of devices and structures in two or more languages, not merely their grammatical and referential equivalence.

I survey below, very briefly, two facts whose full explanation would be unlikely within other framework than the text grammar of functional competence whose important aspects are the descriptions of three types of meaning.

EXAMPLE I

4) *Let us go through certain half-deserted streets,*

....

8) *Streets that follow like a tedious argument*
(T. S Eliot: "The love song of J. Alfred Prufrock")
Chodźmy przez jakieś na pół wyludnione zaułki

....

Uliczki ciągną się jak nudny wykład
(translated by Władysław Dulęba)

Note that the second occurrence of *streets* in the English original is clearly delimited in reference, which is due to the relative clause modification, but also, at least in one of the readings, because of the coreferentiality. It has been customary to constrain coreferential nominals in English grammars in one way only, namely by the preposing of the definite article. Textual repetition, however, which seems quite regularly to perform the delimitative function in languages that lack article systems, could not have been predicted as an independent surface device by sentence grammars. It is interesting to observe that the Polish translator, having disregarded the significance of the repetition for the modal interpretation of the passage, has automatically reduced the likelihood of informational equivalence in that the devising of textual coherence is far weaker in the Polish text than in the original.

While the above instance was to obviate the necessity of the textual analysis in providing the modal framework of the utterance, as well as to illustrate its relevance for the information content, the second example is focussed more directly on the informational function relative to reference.

EXAMPLE 2

1) *April is the cruellest month, breeding*
Lilacs out of the dead land, mixing
Memory and desire, stirring
Dull roots with spring rain.
5) *Winter kept us warm, covering*
Earth in forgetful snow, feeding
(T. S. Eliot: "The waste land")
Najokrutniejszy miesiąc — kwiecień. Wywołuje
Z ziemi umarłej gałąź bzu. Kojarzy
Pożądanie z pamięcią. To on budzi
Korzeń leniwy pierwszym deszczem wiosny.
Zima przed chłodem strzegła nas i kryła
Śniegiem niepamiętliwym ziemię, i żywiła
(translated by Andrzej Piotrowski)

The restrictions on English word order bring about the necessarily ambiguous informational content of the first clause, between the stylistically 'neutral' succession of theme and rheme, and stylistically 'marked' foregrounding of the rhematic (focal) *April*.[3] Naturally either of the readings depends on distinct phonological interpretations. The Polish translator has chosen to disambiguate the clause already at the level of syntactic surface structure. Apparently the damage done to the original is little, the more so that the chosen alternative borrows from the potentials provided by the target language in an ingenious way. Nonetheless the respective structures in Polish and English are not fully equivalent.

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[3] In fact the problem is fairly complicated. Under the first reading the new information ascribes 'the highest degree of cruelty to the thematic April'. Such interpretation seems to be supported by the metaphorical status of 'cruelty of months'. Thus the second interpretation might appear rather unlikely. The reason that I uphold also this alternative is that I do not treat the surface clause as the minimal unit of thematic structuring. The information conveyed by the morpheme *-est* of *cruel* is rhematic in one of the S's underlying the clause, irrespective whether *cruellest* itself functions as theme or rheme in other S's underlying the same clause.

There are more instances in the Polish text where the textual information of the original remains unaccounted for. Eliot consciously exploits versification as a device of thematic structuring. The nominals opening lines 2 - 6 seem to fuse the syntactically regular rhematic function with the function of theme, relative to the preceding and following contexts respectively. In the Polish text thematization by versification is inconsistent (cf. line 2), therefore the parallelism of structure and meaning is missing and, accordingly, the aesthetic effect is weakened.

I do not intend in the least to evaluate either of the above translations. Far more components of structure, meaning and sound must be considered in order that the textual equivalence could be assessed. The issue raised is simply that while confronting two languages, the linguist should not underrate other than referential functions, and that the grammar at his disposal, worked out within general theory of language, should enable him to make a full confrontation.

Translational procedure is a slightly different matter. If we assume that translation, in particular of poetry, inevitably causes a certain amount of destruction of the semantic structure, we may postulate that the loss ought to be minimized by proper balancing of the relevant components in the source and target texts. One can easily conceive of a good translation in which part of the referential equivalence has been sacrificed in favour of phonic effects, provided that the original also foregrounds sound before denotation. Similarly, specific means of devising coherence may constitute primary characteristics of the original poetic message; as seems to be the case in T. S Eliot.

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MATERIAL MODIFIERS IN ENGLISH AND POLISH NOMINAL PHRASES

BARBARA FEDOROWICZ-BACZ

The Jagellonian University of Cracow

1. *Introduction.*

In the present paper the term "material modifier" is used in reference to a class of modifiers which in English and Polish NP's denote material from which the head noun in the structure is made or constructed.

Formally, NP's under consideration are characterized by:

(a) a prenominal position of material modifiers in English as well as in Polish NP's,

(b) the {^+´} stress superfix in English NP's,

which make it possible to distinguish English and Polish NP's with material modifiers from English nominal compounds and Polish adjectivo-nominal compounds containing nouns and denominal adjectives denoting material (for a formal description of NP's as different from nominal compounds in English and Polish see Fedorowicz-Bacz 1974). Consider some typical examples of NP's containing material modifiers:

in English

(1) 1. *a ŵood flóor* (drewniana podłoga) BUT NOT: *a wóod-shèd* (szopa na drewno)

2. *a ŝtone wáll* (kamienny mur) *órange jùice* (sok pomarańczowy)

3. *a ŵoollen 'sock* (wełniana skarpeta) *stráwberry jàm* (dżem truskawkowy)

4. *m̂ilk púnch* (poncz z mleka) *mílkshàke* (koktajl mleczny)

(for a list of nominal compounds containing nouns denoting material see Lees 1960:171), *In Polish*

(2) 1. *słomkowy kapelusz* (straw hat) BUT NOT: *zupa pomidorowa* (tomato soup)
2. *szklane oko* (a glass eye) *wyroby szklane* (glass articles)
3. *gliniany kogucik* (a pottery cock) *ciastko czekoladowe* (a chocolate cake)
4 *żelazny most* (an iron bridge) *sok cytrynowy* (lemon juice)
5. *drewniana noga* (a wooden leg) *stek wołowy* (beefsteak).

Material modifiers considered in their surface NP's can be observed to exhibit different morphological and syntactic characteristics in English and in Polish. The aim of this paper is to account for these surface structure differences in terms of English-Polish contrastive description and to provide a TG interpretation of material modifiers in English and Polish NP's.

2. *A morphological description of material modifiers.*

2.1. Material modifiers in English are either (a) base forms of nouns denoting material, bearing the tertiary stress in their NP's, e. g.,

(3) *a léather bag* — skórzana torba
a ŝtraw mat — słomiana mata
a rûbber tyre — gumowa opona

or (b) denominal adjective derivatives characterized by the derivational suffix {*-en*} added to the base form of a noun denoting material, e. g.,

wooden — morphologically derived from *wood* — in *a wooden leg* (drewniana noga)
woollen — morphologically derived from *wool* — in *a woollen sock* (wełniana skarpeta)
earthen — ,, ,, ,, *earth* — in *an earthen jug* (gliniany dzban)

Historically, the suffix {-en}, which is a remnant of the OE adjective suffix {*-en*}/coming from Gothonic {*-īno*}, and corresponding to Gk {*-ino*}, and L {*-ino*}[1] (Jespersen 1965: 646) was "used especially to indicate material from which something is formed" — as in e. g.,

gylden, lißeren, wexen

In Mod. English, however, the suffix {*-en*} has ceased to be productive and adj. forms in {*-en*} ase "steadily losing ground" in competition with uninflected forms of nouns used as material modifiers (see e. g. Schibsbye 1967: 140;

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[1] Cf. some relevant Latin examples: *aureus* — golden, *arboreus* — wooden but also *barbatus* — bearded and *marimus* — marine. Acc. to Marchand (1960 : 270) Latin suffixes — *inus*, *-anus*, *-unus* denote appurtenance.

Zandvoort 1966:311) The following list gives examples with two coexisting forms of modifiers denoting materials:

(4) *earthen/earth vessels* — naczynia gliniane
flaxen/flax thread — lniana nić
hempen/hemp rope — konopny sznur
wheaten/wheat bread — pszenny chleb
wooden/wood ships — drewniane statki
woollen/wool socks — wełniane skarpetki (Fowles 1965:155).

According to Fowles, who is supposed to be a recognized British authority on the correct use of English, formations in {*-en*} are actually preferred only in the limited list of the examples quoted above In other cases material {*-en*} adjectives ase used only for poetic effect or with a purposeful touch of archaism. The form may still be found in such examples as:

silken hose (jedwabne rajstopy) BUT *silk pyjamas* (jedwabna piżama)
a golden crown (złota korona) BUT *a gold watch* (złoty zegarek)
a leathern jerkin (skórzany kaftan) BUT *a leather pouch* (skórzana torba)
(Fowler 1965: 155).

In southwestern English dialects material adjective formations in {*-en*} are still alive and the adjectives *papern* (made of paper), *steelen* (made of steel), *tinnen* (made of tin) are of common occurrence (Marchand 1961 : 271; Jespersen 1965 : 346).

Adjectives in {*-en*} are frequent in Mod. English when used figuratively (meaning "resembling, like material N") Consider some typical examples:

(5) *a wooden smile* — "drewniany" (sztywny, wymuszony) uśmiech
a golden wedding — złote gody
an ashen complexion — cera jak popiół
silken hair — włosy jak jedwab (jedwabiste włosy)

2.2. In Polish, material modifiers in NP's are only adjectives. Contrary to English, uninflected forms of nouns never occur in the attributive position to denote a material property of the head noun.[2] It may be observed, however, that base forms of material nouns are often found in prepositional phrases in Polish as well as in English, e.g.,

dom z drzewa — a house of wood, suknia z jedwabiu — a dress of silk

Polish material adjectives constitute a numerous group and their class is still open.[3] Consider such comparatively modern formations as:

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[2] In Polish the structures of modification in which an uninflected noun functions as a modifier are rare but possible, cf. eg., *cud dziewczyna, zuch chłopak, herod baba*, etc.

[3] In his classification of Polish adjectives Łaszyn (1915) distinguished a separate group of material adjectives among the five main classes established on the basis of the meaning of adjectives. Polish grammar books discuss the group of adjectives considered here as a separate semantic class with the accepted name of "przymiotniki materialne" (see Bartnicka 1961:217; Kurkowska 1953).

kauczukowy (made of caoutchouc), *plastikowy* (made of plastic), *nylonowy* (made of nylon).

The characteristic derivational suffixes of the group are: {*-owy*} and {*-ny*}, the former seeming the more productive. Of the following coexisting formations in {*-ny*} and {*-owy*} only the {*-owy*} — adjectives have survived and are commonly used in Mod. Polish. Cf.,

(6) *metalny* — metalowy
papierny — papierowy
piaseczny — piaskowy[4]

It cannot be said, however, that the adjective suffixes {*-owy*} and {*-ny*} carry the meaning of "made of" in Polish since they are the most productive denominal adjective suffixes in general, characteristic also of other types of adjectives derived from nouns. Cf.,

metalowy (of metal) but *ojcowy* (father's)
cytrynowy (containing, or like lemon)
ogniowy (referring to fire)
zaopatrzeniowy (referring to supplies)

In her study on the morphological formation of Polish adjectives Kurkowska (1953) observes that the range of use of material adjectives was especially wide in older Polish (cf. such no longer used formations as *piaseczny*, *papierny*, *metalny*) and "has narrowed but slightly in the Polish of today" (Kurkowska 1953 : 61).

Like English material adjectives, Polish material adjectives may be used figuratively, and we find such typical NP's as:

(7) *zlote ręce* (hands of gold)
dębowe ucho (an oaken ear)
slomiany zapal (straw enthusiasm)
stalowe nerwy (nerves of steel),

which naturally evoke different extra-linguistic associations in Polish and in English.

To wind up this morphological discussion of material modifiers it seems worth mentioning that Polish material adjectives often have corresponding nominalized formations. Kurkowska (1953 : 83) quotes two examples to this effect: *welniak* and *miedziak*, postulating that they are equivalent to:

(8) *Coś jest z welny* (something is made of wool) — *welniak*
Coś jest z miedzi (something is made of brass) — *miedziak*

thus corresponding to material adjectives: *welniany* (woollen) and *miedziany* (brazen) Other examples that maybe added here are:

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[4] Kurkowska quotes one exception in which the reverse process is observed — out of the two co-existing forms: *mosiężny* and *mosiądzowy* the form in {*-ny*} is used in Mod. Polish. There may be more examples of this type but the forms in {*-owy*} seem to predominate in number.

(9) *gumiaki* — buty z gumy (rubber boots)
nylony — pończochy z nylonu (nylon stockings)
metalki — narty z metalu (metal skis)
dederony — wyroby z dederonu (articles made of dederon fabric)

The existence of these nominalized forms of material adjectives denoting NP's containing material adjectives seems to suggest that in NP's under consideration the lexical meaning of material modifiers is more important than the lexical meaning of the head nouns they modify.

3. *A semantic description of material modifiers in NP's.*

It is believed that the same semantic relation of an object and the material from which this object is made underlies structures of modification consisting of a material modifier and a head noun in English and Polish. Consider some typical examples of such structures:

in English:
(10) *a wooden leg* (drewniana noga) — leg made of wood
a woollen sock (wełniana skarpeta) — a sock made of wool
wheat bread (pszenny chleb) — bread made of wheat
a stone floor (kamienna podłoga — posadzka) — a floor made of stone
an iron bridge (żelazny most) — a bridge made of iron;

in Polish:
(11) *szklane oko* (a glass eye) — oko zrobione ze szkła
gliniany kogucik (a pottery cock) — kogucik zrobiony z gliny
kamienny mur (a stone wall) — mur zrobiony (zbudowany) z kamienia
drewniany dom (a wooden house) — dom zrobiony (zbudowany) z drzewa
papierowa torba (a paper bag) — torba zrobiona z papieru

Some informal semantic remarks concerning the relation between material modifiers and their head nouns in the NP's under consideration may be made at this point.

3.1. It may be noted that material modifiers describe a *fundamental* property of the nouns they modify, essential for the meaning of the NP's considered. The objects denoted by these NP's simply do not exist without this property, e.g., if wood is taken away from an object called *a wooden leg*, the object as such ceases to exist.[5] It may be said that the material adjective modifier is responsible for the lexical meaning of the whole NP, influencing the meaning of the head noun in some essential way.

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[5] Szliferszta jnowa (1960 : 35) mentions the NP's *mur kamienny* and *kraciasta chusta* as examples of phrases from which modifiers cannot be removed since the property they describe is essential for the meaning of the objects they define. "If the modifying adjective is removed the general picture of the object will change" ("tu nie można usunąć przydawki ponieważ cecha, którą ona uwydatnia wchodzi niezmiennie w skład obrazu określanego przedmiotu. Usunięcie przymiotnika zmienia ogólne wyobrażenie o przedmiocie").

The property expressed by the adjectives under consideration does not increase the load of semantic information about the head noun automatically by adding another descriptive feature [+material] to the set of features defining N.[6] The insertion of a material modifier into a NP can change the syntactic feature specification of the head noun, and so in a sense influence its lexical meaning. For example, in terms of Chomsky's syntactic features (Chomsky 1965 : 83) the noun *horse* (koń) would be given the following feature specification: [+common], [+countable], [+animate], [−human]. If a modifier *wooden* (drewniany) is added to form the NP *a wooden horse* (drewniany koń), the feature [+animate] of the noun *horse* will change into [−animate]. Cf.,

(12) a horse — koń	a wooden horse — drewniany koń[7]
⟨+N⟩	⟨+N⟩
⟨+common⟩	⟨+common⟩
⟨+count⟩	⟨+count⟩
⟨+animate⟩	⟨−animate⟩
⟨−human⟩	⟨−human⟩

This juxtaposition explains what is understood here by the formulation "a material modifier can change the lexical meaning of the head noun it modifies" and it many partially account for the semantic integrity of material modifiers and their head nouns.[8]

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[6] If the meaning of the adjectives under discussion was considered from the point of view of their ability to specify the possible referents of their head nouns they could be said to narrow the range of referents of N. In terms of the set theory this fact may be represented in the following manner: the set of objects denoted by NP's of the form: Material Adj−N ⊂ the set of objects denoted by N e. g., the set of wooden houses ⊂ the set of houses.

[7] For the purposes of the argument presented the syntactic features have been specified for NP's not analyzed into their ultimate constituents. In this section of the paper NP's of the type *a wooden horse* are treated as single lexical items.

[8] A [+animate] — to — [−animate] change in the semantic feature characteristics of NP's under consideration seems to provide an argument for treating NP's containing material modifiers as lexical wholes. This proposal, however, might be objected to on the grounds of Polish syntax, where [−animate] masculine nouns in the function of the direct object retain the case ending of the Nominative whereas [+animate] masculine nouns used in this function acquire the ending of the Genitive, cf:

a) *Stół* (NOM) (a table) — Widzę *stół* (ACC=NOM) (I see a table)
[−animate] **stolu* (GEN)
but: *Chlopiec* (NOM) (a boy) — Widzę *chlopca* (ACC=GEN) (I see a boy)
[+human] **chlopiec* (NOM)
Pies (NOM) (a dog) — Widzę *psa* (ACC=GEN) (I see a dog)
[+animate] **pies* (NOM)

This generalization does not apply to [−animate] NP's containing material modifiers such as our *drewniany koń*/*a wooden horse* in the pair: *koń* [+animate] — *drewniany koń* [−animate], Cf:

b) Widzę *konia* (GEN)

The semantic feature of material modifiers discussed here finds a very good contrastive illustration in lexicons of Polish and English, where the difference between the noun *wall* and the noun *wall* in the NP *a stone wall* containing the material modifier *stone*, is rendered by two different lexical items in Polish translation equivalents. Cf.,

(13) *a wall* — ściana
a stone wall — (kamienny) mur

The same contrastive observation applies also to the pair: *floor- stone floor*. Cf:

(14) *floor* — podłoga
stone floor — (kamienna) posadzka

Whereas the primary Polish equivalents of the English words *wall*, *floor* are *ściana*, *podłoga* respectively, the primary equivalents of the English phrases *a stone wall*, *a stone floor* are (*kamienny*) *mur* and (*kamienna*) *posadzka*.

The ability of material modifiers to influence the meaning of the head nouns they modify differentiates them from other modifiers, e. g., adjectival modifiers denoting colour. Consider the syntactic features of the noun *horse* in the following examples:

(15) a horse — koń : a white horse — biały koń

a horse — koń	a white horse — biały koń
⟨+N⟩	⟨+N⟩
⟨+common⟩	⟨+common⟩
⟨+count⟩	⟨+count⟩
⟨+animate⟩	⟨+animate⟩
⟨−human⟩	⟨−human⟩

The property expressed by adjectival modifiers denoting colour does not change the syntactic feature specification of the head nouns they modify (as shown in the example above). Adjectival modifiers of colour and modifiers denoting material may be treated as the carriers of the semantic features [+colour] and [+material] respectively. On the basis of the evidence given here it may be claimed that the feature [+material] should be specified before the feature [+colour] in the semantic description of every noun.[9]

Widzę *drewnianego konia* (GEN)
**drewniany koń* (NOM)

There are, however, examples of one-word lexical items in Polish which do not confirm this generalization, e.g., the [—animate] masculine noun *trup* (*a corpse*). Cf.

c) *Trup* (NOM) — Znalazłem *trupa* (GEN)
[—animate] **trup* (NOM)

These data suggest two solutions: either the syntactic generalization requiring the Nominative Case ending on [—animate] masculine nouns has to be abandoned or constrained to account for examples such as those quoted above, or NP's containing material modifiers cannot be treated as single nouns with the characteristics [—animate] and the feature specification of nouns such as *trup* has to be reconsidered.

[9] The feature [+material] might in fact be treated as an equivalent or substitute of

3.2. It may be observed that the feature of material expressed by material modifiers in NP's discussed constitutes *permanent* characteristics of the nouns modified. Consider the following pairs of examples:

(16) (a) *a wooden bridge* (drewniany most) : *an iron bridge* (żelazny most)
$\mathrm{Mod}_1 - N_1$ $\mathrm{Mod}_2 - N_2$
(b) *a white bridge* (biały most) : *a black bridge* (czarny most)
$\mathrm{Mod}_1 - N_1$ $\mathrm{Mod}_2 - N_2$

In (16a) N_1 and N_2 have two different referents in reality. Substitution of one material modifier by another material modifier always denotes a change of referential meaning of the head N — the change of material from which the bridge is made into another material means in practice the substitution of the bridge by another bridge. In (16b) N_1 and N_2 may point to the same referent in reality. Substitution of a modifying adjective denoting colour by another adjective denoting colour in an NP does not have to imply the change in the referential meaning of the head noun — in example (16b) the bridge may easily be painted black and it will still remain the same bridge. The property expressed by material modifiers seems to be always an inalienable feature of their head nouns.[10]

To sum up the semantic description of material modifiers in NP's the following features may be taken as characteristic:

1. material modifiers are integrally connected with the meaning of the head nouns they modify; they are able to change the lexical meaning of their head nouns;
2. they always express an inalienable (permanent) property of their head nouns.

The informal observations made here are believed to underlie both English and Polish structures of modification with material modifiers. A thorough semantic research is needed to account for them in terms of a complete formalized description.

4. *Possibilities of semantic-syntactic interpretation of NP's containing material modifiers*

Following the semantic description of material modifiers in the nominal

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the feature [−animate] since all [−animate] physical objects are made or composed of some material and there are no [−animate] objects that would not have the feature [+material]. Cf. Rysiewicz (1937 : 126): "pojęcie materii szybko ulega ewolucji i może być pojmowane jako stała, wyróżniająca cecha przedmiotu" ("the notion of matter has been changing rapidly and it may be understood as a permanent distinctive feature of any object").

[10] Szliferszteinowa uses the feature of alienable characteristics as the main criterion to identify the class of possessive adjectives in Polish (e. g., *ojcowy*, *lisi*) (Szliferszteinowa 1960).

structure of modification, given in the preceding section of this paper, it may be said that the semantic concept:
SOMETHING is made of MATERIAL
underlies all NP's containing material modifiers in English and in Polish. Thus,
(17) (a) *a wooden leg=a leg is made of wood* — in English
(b) *drewniana noga=noga jest zrobiona z drzewa* — in Polish

In order to account for the syntactic derivation of NP's (17a) and (17b) the following transformational processes are postulated:

In English:

(18) (a) *Somebody made a leg (out) of wood*→(b) *the leg is made of wood*→(c) *the leg is of wood*→(d) *the leg is wood*→(e) *a wooden leg*

In Polish:

(19) (a) *Ktoś zrobił nogę z drzewa*→(b) *noga jest zrobiona z drzewa*→(c) *noga jest z drzewa*→(d) *noga jest drewniana*→(e) *drewniana noga*.

4.1. An interpretation of the underlying sentences (18a) and (19a) respectively, may be attempted in terms of Fillmore's (1968) case-grammar. By the term 'case' Fillmore (1968 : 58) understands "the syntactic-semantic relationships underlying every sentence". In his theory case relationships are "primitive concepts present in the base component of the grammar of every language" and "a designated set of case categories is provided for every language, with more or less specific syntactic, lexical and semantic consequences" (1968 : 2). In Fillmore's grammar (1968 : 33) verbs are described in terms of case-frames which specify their possible syntactic-semantic relations with nouns, and the prepositions (as well as postpositions and case affixes) present in the surface sentences "are in fact realizations of the underlying element K (for Kasus)". In the rules suggested for English prepositions, however (Fillmore 1968 : 32), the preposition *of*, which is of interest to us since it appears in the structure under consideration (18a) is not mentioned as typical of any of the main cases specified, and the Genitive Case, traditionally associated with this preposition in English, is not included among Fillmore's basic concepts (see Fillmore 1968 : 24). Thus, strictly in terms of Fillmore's grammar, the *of*-phrase *made of wood* might be intepreted as expressing the relationship of the Locative, "the case which identifies the location or spacial orientation of the state or action identified by the verb" (Fillmore 1968 : 25). The deep structure of the sentences in question could be represented as follows:

in English

(20) Somebody made a leg of wood (with the case-frame of
MAKE+[−A,+F, +L])[11]

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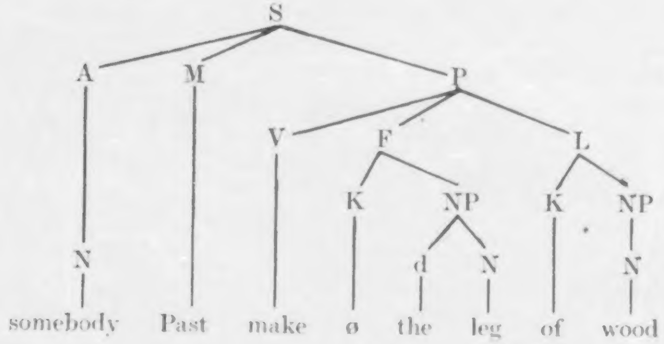
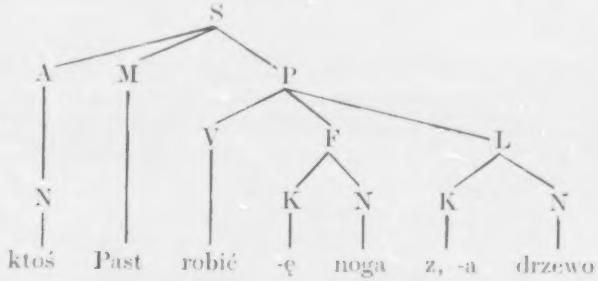
[11] The symbols F and A stand for Factitive and Agentive case notions (Fillmore 1968 : : 24).



in Polish
(21) Ktoś zrobił nogę z drzewa (with the case-frame of ROBIĆ+[−A, +F,+L])



This Locative inteprertation of the *of*-phrase in question may find some support in:

1. the historical interpretation of the relation of an object and the material from which the object was made as the actual *ablative* relation rendered by the Ablative or the Genitive Cases in Indo-European languages (see Heinz 1955 : 77, 97)[12]
2. the historical development of the preposition *of* which originally meant "from" (Nagucka 1971 : 58)
3. the historical, though now discredited, "localistic" theory of cases (see

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[12] Cf. "Stosunek wyrobu do materiału jest właściwie stosunkiem ablatywnym (por. *signum ex aere*, itp), stąd w językach, w których nastąpił synkretyzm genetiwu i ablatiwu, trudno przeprowadzić rozgraniczenie w tego rodzaju wypadkach" (Heinz 1955 : 77)

"Co się tyczy stosunku materiału i wytworu, to polega on właściwie na stosunku ablatywnym, tak iż różnica między genetiwem a ablativem jest tutaj różnicą stosunku mniej i bardziej sprecyzowanego ale o tej samej zasadniczej treści" (Heinz 1955 : 97).

Heinz 1955:18 - 22) according to which the Genitive Case (including the traditional Genetivus materiae) was defined as "the case of movement from" (see Fillmore 1968 : 9)

4. in terms of Fillmore's "relational nouns" the phrase '*a leg of wood*'' might perhaps be intepreted as "locational", i.e. expressing the L relationship typical of relational nouns which do not have a specifically personal reference and "sometimes name parts of associated objects" (see Fillmore 1968:81).

4.2. Another and perhaps more acceptable and simpler interpretation of the structures under discussion could be furnished if Nagucka's proposed modification of Fillmore's case grammar, suggesting the inclusion of the generic $N \subset N$ Genitive relation into the basic case concepts, is adopted (see Nagucka 1971). The verbs **MAKE** and ROBIĆ could then be assigned the case frame +[−A, +F, (+G)] with the feature [+G] instead of [+L]. Semantically, this approach would seem more convincing and it finds serious justification in the traditional concept of Genetivus materiae, expressing the relations of material and objects made from this material. In his work on the Genetive in the Indo-European case system, Heinz discusses this type of Genitive stressing its partitive function (Heinz 1955 : 77, 97, table 2).[13] Consider some examples of Genetivus materiae:

(22) *lactis imber* in Latin
    aukso žiedas (a ring of gold) in Lithuanian

The genitival intepretation of the structures discussed here agrees with the semantic description of material modifiers given in section 3 of this paper, where it was assumed that the meaning of the head nouns in NP's containing material modifiers is integrally connected with the lexical meaning of their modifiers.

In Polish grammars material modifiers (przymiotniki materialne) are often interpreted as morphological realizations of the function of the Genitive of Material (see Bartnicka 1961 : 217; Kurkowska 1953 : 84).

In view of these traditional considerations based on numerous semantic studies of the relations between adjectives (material adjectives included) and the system of cases, the Genitive interpretation of material modifiers proposed here seems more convincing than the approach through the Locative case, for English as well as for Polish.

5. *An interpretation of the syntactic differences observed in English and Polish NP's containing material modifiers.*

When considered on their surface structure level, material modifiers in English and Polish may be said to differ in two ways (in Fedorowiez-Baez

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[13] In Finnish the relation of an object and its material is expressed by means of the Partitive Case, e. g., Ovi on tammea — the door is *of oak*; Pullo on keltaista lasia — the bottle is *of* yellow *glass*.

1974 material adjectives were quoted as an example of uneven distribution of typical syntactic features in English and Polish).

(a) English materials modifiers do not always appear in the structure of predication whereas Polish material adjectives do, e.g.,
**this leg is wooden* is ungrammatical in English whereas
ta noga jest drewniana is perfectly acceptable Polish

(b) English material modifiers cannot be separated from their head nouns whereas Polish material modifiers admit of an intervening element (for examples see Marton 1970 and Fedorowicz-Bacz 1974), e.g.,
**this wooden dirty leg* is ungrammatical in English but
ta drewniana, brudna noga is acceptable in Polish.

Since it is claimed in the present paper that English and Polish material modifiers in equivalent NP's have the same semantic-syntactic interpretation, a few words of explanation are needed to account for the differences observed.

5.1. Ad. (a). In accordance with the transformational processes postulated for English and Polish NP's containing material modifiers (section 4 of this paper) it is assumed that the intermediate structures *the leg is wood* (18d) and *ta noga jest drewniana* (19d) are equivalent, and that Polish material modifiers in the predicative position are rendered by English material noun modifiers in this position. Thus, English sentences of the type:

(23) a. this furniture is oak
b. this table is marble
c. this leg is wood

which are more and more frequent in Mod. English (see Hill 1958 : 235, and Marchand 1966) (cf. even such typically adjectival structures as *these houses are more stone than wood* — Hill 1958 : 236n) should be rendered in Polish by the structure "N jest Material Adj", and not "N jest Material N", which is unacceptable here, i.e.

(24) a. te meble są *dębowe* NOT * te meble są *dębem*
b. ten stół jest *marmurowy* NOT * ten stół jest *marmurem*
c. ta noga jest *drewniana* NOT * ta noga jest *drzewem* (or *drewnem*)

English material forms in {*-en*} should be treated as morphological variants of formations without {*-en*} in this case, and since the form without {*-en*} can appear in the predicative position after the copula English material adjective modifiers may be included into the large group of "copulative adjectives" (Fedorowicz-Bacz 1974).

Ad. (b). The possibility of an intervening element between a Mat. modifier and its head N in Polish seems very strongly connected with the question of modifier order in multiple modifier NP's (see Fedorowicz-Bacz 1974 for multiple adj. phrases) which is much freer in Polish than in English. The problem badly needs investigation in terms of semantics and style. At the moment it may merely be observed that not all modifiers can really intervene and occupy the position between a material modifier and its head noun in NEUTRAL Polish, cf.,

(29) a. *ten skórzany zniszczony but*
or b. *ten skórzany bardzo zniszczony but*,
but not readily: c.?**ten skórzany stary but*, d.?**ten skórzany żółty but*, or e. * *ten skórzany duży but*

and that the structures with the same intervening element placed before material modifier are always grammatical, and sometimes definitely preferred, e.g.,

(26) a) *ten skórzany zniszczony but* OR b) *ten zniszczony skórzany but*.

In both cases here the element "zniszczony" describes the material from which the noun "but" is made (i.e. it may be claimed to modify the material adjective in the phrase) and its position seems to be a question of emphasis. Thus the difference outlined in (b) may be dispensed with in the present paper since it really belongs to the province of English-Polish contrastive stylistics.

6. *Contrastive conclusions*

(a) A contrastive conclusion following the Genitive intepretation suggested here for English and Polish material modifiers corroborates an earlier suggestion of the author (Fedorowicz-Bacz 1974) that all denominal modifying adjectives (mat. adjs. included) in English and Polish should be discussed under the heading "Noun modification in English-Polish contrastive studies", since they are nothing but different surface realizations of the semantico-syntactic case relations of their base nouns, and the interpretive approach through the theory of case may prove successful here.

(b) It is believed that some observations discussed in this paper will help further research on the order of adjectives in multiple adjective NP's in English and Polish. The semantic and syntactic features of material modifiers outlined here may be used to account for the next-to-noun position of material adjectives in English and Polish NP's containing a prenominal string of modifying adjectives unmarked stylistically.

(c) The lexical observations made here might prove helpful in a detailed contrastive study on the lexicons of Polish and English (cf. the intepretation of the difference between *wall* — *ściana* and *a stone wall* — *kamienny mur*; also the explanation of the high frequency formations of the type *wełniak* in Polish).

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THE ELEMENT OF NEGATION IN ENGLISH AND POLISH COMPARATIVE CONSTRUCTIONS

ALICJA PISARSKA

Adam Mickiewicz University, Poznań

In 1917, Jespersen, relying on his acute feeling for grammatical analysis, intuited the presence of a negation element in comparatives. There has been a number of attempts to analyze comparative structures since then. Of transformational approaches, some seem to be quite inadequate, like that of Lees (1961), Smith (1961), Chomsky (1965) and Doherty and Schwartz (1967). These cannot be treated as adeguate for the simple reason that the above mentioned authors take *Jolm is tall* and *Mary is tall* as sentences underlying *John is taller than Mary*. They seem to disregard the fact that the comparative sentence (*John is taller than Mary*) does not imply that John is in fact tall, nor does it imply that Mary is tall. There are treatments where this fact is taken into consideration of comparative sentences in which he tries to account for the fact that comparatives do not imply the existence of the feature compared. Thus, taller in his view expresses the mere relation of features in the cases of John and Mary. Such an intepretation does not state that the feature tall is present in the underlying sentences. Since there is no way to judge from the examples quoted above whether John is in fact tall or Mary is in fact tall, Seuren proposes that the underlying sentences should contain some information that there is an unspecified degree of the feature tall. He, in fact, uses the term "extent" to account for this unspecified degree. Consequently, the sentences underlying *John is taller than Mary* will be *John is tall to the extent e and Mary is not tall to the extent e* or *John is tall to an extent to which Mary is not*. Although this interpretation has been severely critized by Bartsch and Vennemann (1972, 1973) we consider it to be quite satisfactory for our purposes.

Bartsch and Vennemann seem to misintepret Seuren's definition "to the extent *e*" by claiming that he has to account for two comparatives in the quoted sentence rather than one. They paraphrase his treatment of "extent" and try to convince us that what he is saying is *John is taller than some e and Mary is* *shorter than that e*, which, we feel, is not what Seuren meant at all. Instead, Bartsch and Vennemann suggest that it would be more adequate to express the "uspecified degree of tallness" by means of a measure function as applied to the dimension Height (Tallness) — f_T^M. Thus, in their intepretation, the sentence will be represented by

$$f_T^M(x, \text{John}) > f_T^M(y, \text{Mary})$$

with, as they call it, "direct" verbalization:

The height of John is greater than the height of Mary and "better" verbalization:

John is taller than Mary.

Such treatment, in our view, in no way differs from that of Seuren's for what Bartsch and Vennemann express in symbols Seuren expresses in words. One could, for instance, choose a solution combining the two and represent the sentence by means of:

John is x tall and Mary is y tall

where $x > y$ and x *tall* ≠ *tall*, y *tall* ≠ *tall*

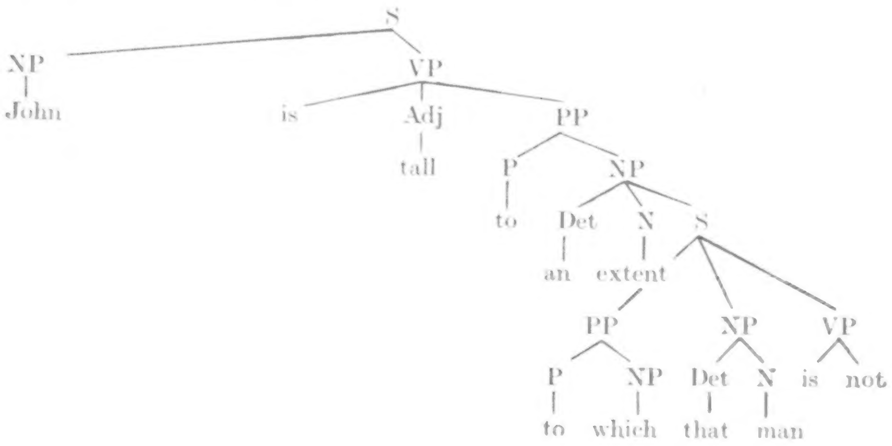
Finally, we feel that Seuren's proposal seems to be better for the simple reason that Bartsch and Vennemann try to explain comparative by means of comparative in the "direct" verbalization of the semantic intepretation of the sentence in question.

Consequently, we will base our investigations on Seuren's interpretation of the comparative sentence.

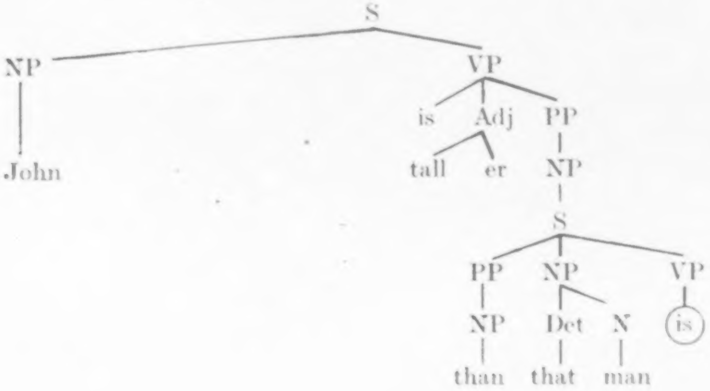
Accordingly, the sentence

John is taller than that man (is)

will have the following deep structure:



and the following rule is proposed for COMPARATIVE INTRODUCTION:
X — Adv — to an extent to — which — Y — not — Z
1 2 3 4 5 6 7=(optional)
1 2+er 0 than 5 0 7
This rule would turn the previous deep structure into:

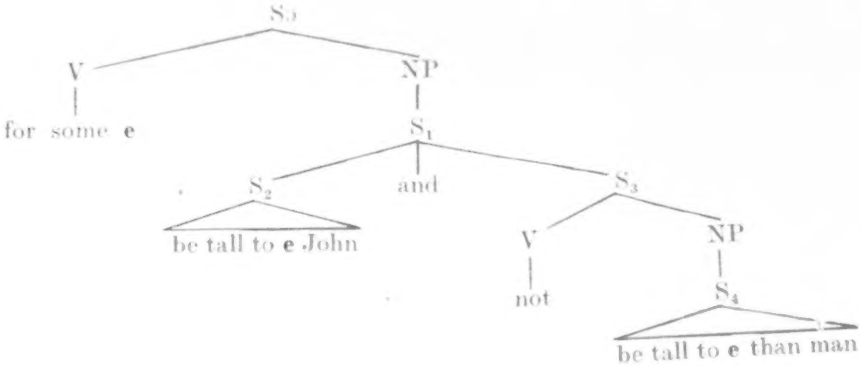

S
NP
VP
John
is
Adj
PP
tall
er
NP
S
PP
NP
VP
NP
Det
N
is
than
that
man

is (and consequently the vacuous VP above it) may be deleted optionally (Ross (1968)).

As Ross' treatment needs amendment, Seuren proposes his own representation of the deep structure of the sentence, eliminating the relative approach to "extent". The following is the representation of what he calls "simple comparative". Sentences like

He is taller than anybody
He is a taller man than Mary is a woman

(will have more complex semantic representations of. Seuren (1970:542)):


S₀
V
NP
for some **e**
S₁
S₂
and
S₃
be tall to **e** John
V
NP
not
S₄
be tall to **e** than man

It is worth mentioning again that the element *be tall to e* does not carry the lexical feature tall but the whole phrase functions as a way to express "some unspecified degree of vertical dimension". Ross (1968) also draws our attention to the fact that words like any and ever which usually occur in *if*-clauses and negative and interrogative sentences but not in affirmative sentences may be also found in THAN-clauses:

He solves problems faster than any of my friends ever could.
* Any of my friends could ever solve those problems.
Could any of my friends ever solve those problems?
At no time could any of my friends ever solve those problems.
If any of my friends ever solve those problems, I'll buy you a drink.

The negative elements cannot occur in THAN-clauses:

*He is taller than nobody here.
*Bill ran faster than I couldn't.

These facts would suggest that there is a negative element present in the structures underlying the THAN-clauses.

Following Seuren's interpretation of the relation of comparison based on the "extent-phrase" we shall see that the Polish sentence

Janek jest wyższy niż Marysia.

will have a similar deep structure to that of the English sentence:

Janek jest wysoki do *e* i Marysia nie jest wysoka do *e*

Since there seems to be no essential difference between the underlying structures of English and Polish comparative sentences of inequality

John is taller than Mary.
Janek jest wyższy niż Marysia.

we might say that the semantic intepretation of such a comparative sentence both in English and in Polish will be:

Adj — to some *e* — X and — not — Adj — to *e* — Y

and the following set of rules will operate to transform this semantic structure into its surface representation:

And — Deletion
SV — Inversion
Operator Incorporation
more-than — Rule

Thus,

be tall to *e* John and not be tall to *e* Mary ⇒
be tall to *e* John not be tall to *e* Mary ⇒
John be tall to *e* not Mary be tall to *e* ⇒
John be tall to *e* more than Mary be tall to *e* ⇒
John be more tall to *e* than Mary be tall to *e* ⇒
John be more tall than Mary be tall ⇒

John be taller than Mary be tall ⇒
John be taller than Mary be ⇒ (optional)
John be taller than Mary ⇒
John is taller than Mary

Tense has been disregarded here as much as possible to avoid unnecessary complication. Only in the last operation it is taken into consideration to give the final form of the comparative sentence.

Accordingly, the same rules will operate for Polish:

być wysoki do ε Janek i nie być wysoki do ε Marysia

to obtain finally:

Janek jest wyższy niż Marysia.

There is no need to mention that in the case of the Polish sentence additional rules will operate in order to obtain the agreement between the adjective *wysoki, -a, -e* and the noun (masc. sg. in the case of Janek and fem. sg. in the case of Marysia).

Certain grammatical features may occur with negation, other preclude negation. Those features that show positive polarity do not occur in the THAN-clauses. The negative polarity features occur in THAN-clauses even when no overt negation element is present. Let us consider some English examples showing the occurrence of those features, and their Polish EQUIVALENTS:

You have already got less support than he has.
*He has got more support than you already have.
Już masz mniej zwolenników niż on.
*On ma więcej zwolenników niż ty już masz.
I would rather carry less than he does.
*He carries more than I would rather do.
Wolałabym raczej nieść mniej niż on.
*On niesie więcej niż ja wolałabym.
I could just as well eat a bit more than you do.
*You eat a bit less than I could just as well do.
Mogłabym właściwie jeść trochę mniej niż ty.
*Jesz trochę mniej niż ja właściwie mogłabym.
I would pretty much like to run faster than he does.
*He runs slower than I would pretty much like to.
Bardzo bym chciała biec szybciej niż on.
*On biegnie wolniej niż ja bym bardzo chciała.
He would be far better off with less money than he has.
*He has more money than he would be far better off with.
Byłoby mu znacznie lepiej z mniejszą ilością pieniędzy niż obecnie posiada.
*Posiada obecnie więcej pieniędzy niż ilość, z którą byłoby mu znacznie lepiej.
John still wants to buy more books than he can afford.

*John can afford fewer books than he still wants to buy.
On ciągle chce kupować więcej książek niż go na to stać.
*Stać go na mniej książek niż ciągle chce kupować.

Some of the Polish equivalents sound peculiar but, on the whole, they fall into the same pattern as the English sentences. Items like: *already*, *rather*, *just as well*, *pretty* (as a degree adverb), *far* (with comparison), *still* do not allow for sentence negation.

On the other hand, in English negative polarity items like *much*, *be all that*, *bother*, *lift a finger*, *care to*, *far + need*, *infinitive*, *can possibly*, *the slightest*, *budge*, *can help* and *can stand/bear*, or *at all* occur in THAN-clauses.

The emperor was more inclined to amuse himself than to do much for his country.
That amount of spaghetti was more than I was at all keen to eat.
That is more than he will bother thinking of.
John's laziness was stronger than his willingness to lift a finger.
The fifth glass was more than I cared to drink.
I've solved lots of more difficult problems than the has got very far even in understanding.
John runs faster than he need run.
He was a greater bore than I could possibly put up with.
He went further than I had the slighest intention of going.
Given their characters it is much easier for Bill to give in than for John to even budge.
My urge to steal was stronger than I could help.
The sound of her voice was more than I could stand.
This is more serious than I would have believed at all possible.

Not all of the above examples can be rendered in Polish without drastic changes in their structures. Those that can, however, back up the assumption that the negative polarity element may occur in the Than-clauses.

Any and ever mentioned above in Ross' examples may also appear in Polish equivalent structures:

Załatwiał interesantów grzeczniej niż ktokolwiek kiedykolwiek przedtem.

There is also independent evidence (Joly (1967) and König (1970)) supporting the assumption that there is a negative element in the underlying structure of comparatives. In many dialects of English *nor* is used instead of *than*,

I know better *nor* that. (Worcestershire)
Bill can read faster *nor* a dog can trot. (London)
He's richer *nor* you'll be. (Louisiana, U.S.A.)

Nor looks backward and links the second clause of a comparative sentence to the first (coordinating function). It looks forward and it signifies that the second clause is involved in the negative movement (negating function). *Than* operates exactly in the same way (Joly (1967 : 29)).

Than has *ponne* (by which not) as its etymology and in Old English corresponds directly to a derivational stage as in

John is tall to an extent to which that man is not.

Moreover, the assumption provides explanation for the negation element in the comparative structures of other languages such as French, Spanish, Italian, Welsh, Latin and New High German, and for the existent of a negation copying transformation in dialect of English such as Cockney.

He has never been no good to no woman not never.

As for Polish dialects, we have not been able to find suitable examples with negation actually present in the surface structure but in Brückner (1957 : 354), the words *niżby, niż(e)* receive the following comments:
"...przy porównaniach, które Słowianin stale w przeczenie ubiera, np. większy niż ty" (used in comparison where a Slav always uses negation).

There are, however, comparative sentences in Polish that do not contain niż in their surface structures:

Janek jest wyższy od Marysi.

But such sentences are fully synonymous to those using *niż* and therefore their underlying structure will have the element of negation.

In conclusion, we may say that the Polish language provides evidence in favour of the assumption that the element of negation is present in the comparative sentences expressing inequality of features, and that element of negation, though not always present in the surface structure, occurs in the than-clauses. As may be seen from the examples quoted in this paper, it is clear that not all English comparative sentences have their Polish equivalents, at least in their surface representations, but the examination of their deep structures proves the assumption that some element of negation is present in the comparison of inequality.

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A CONFRONTATION OF *SAY, SPEAK, TALK, TELL* WITH POSSIBLE GERMAN COUNTERPARTS

DOROTHEA LEHMANN

Gesamthochschule Paderborn

1.0 Introduction

It can be assumed that languages abound in verbs with speech act reference as part of their lexeme structure; this assumption can be stated as a fact at least for the two languages under consideration, English and German. When the abundance can be stated on the grounds of an intuitive pre-classification, two essential questions remain yet to be answered: what semantic features do these verbs, or more precisely, their lexeme structures have in common, and with respect to what features or feature classes do they differ?

These four verbs have been chosen for at least four reasons: Firstly, even under conditions of pre-classification they can definitely be called verbs of saying, i.e. speech act reference can be recognized as part of their lexeme structure. Secondly, they can help to demonstrate a classification system of semantic features which can possibly, at least to some degree, account for the lexeme structure of verbs with speech act reference. Thirdly, although a proposed system of this sort can explain a fairly wide range of semantic conditions of verbs with speech act reference, some aspects of the lexeme structure of just these four verbs are so subtle that for this reason they deserve special attention and demonstration. Fourthly, on the grounds of their seeming similarity, semantic and otherwise, to a group of German verbs of saying, they lend themselves to a confrontative analysis which will either confirm or deny these supposed similarities.

Rather than immediately to compare the lexeme structures of the verbs of one language with those of some verbs of the other language, each verb will be described in terms of the classification system mentioned before. This system is supposed to represent a semantic matrix of speech act reference, identifying the constant and the variables of meaning.

2.0 Feature Classification for Verbs of Speech Act Reference

2.1 Syntagmatic Aspects of the Classification

Speech act reference has to be viewed under lexical as well as under syntactic aspects — this consideration is of general importance for the analysis. The focus of attention is on the verbs; their lexeme structure will be described in terms of a syntagmatic arrangement that also holds for the verbs syntactic expansion into sentences.

2.2 Semantic Representation of Speech Act Reference

The syntagmatic formula A' *says'* x' *to* B' is considered to represent the basic semantic conditions of speech act reference. Its elements and their arrangement are derived from A *says* x *to* B as the notation for the actual speech act. The actual speech act is a linguistic event in itself, in this case it has as its linguistic object another speech act, namely A' *says'* x' *to* B'. Accordingly, A' *says'* x' *to* B' is seen as 'embedded' in the frame A *says* x *to* B, occupying the position x as the realization of the actual speech act. By means of *say* the position x is a 'function' of the *speaker* A, which here means that A' *says'* x' *to* B' is a 'function' of the *speaker* A. His reference not only depends on conditions of the speech act referred to, but also on factors which are determined by his role, as e.g. interpretation of and attitude towards the speech act referred to, or selection of certain of its aspects.

This dependence on conditions of the actual speech act and the relation to the formula A *says* x *to* B understood, A' *says'* x' *to* B' as the syntagmatic formula for the semantic representation of speech act reference is the basis for the analysis and description of verbs with speech act reference and their lexeme structure.

In the positions A' and B' the formula identifies the two personal roles involved, namely the speaker of the speech act referred to and the (intended) hearer, which themselves are attached to and determined by the predicate *say'* of this syntagma. Another role determined by *say'* is x', the speech event referred to, or — to put it differently — the verbal part of this speech act. 'Verbal part' is here preferred to a term like 'communication' for at least two reasons. Although communication very often will be implied in a speech act, it need not necessarily be so; on the other hand, communication need not be verbal. The piece of language code transmitted from A' to B' is then x', and *say'* can be defined as the process of transmission or rather its reference.

The formula hinges on its predicate *say'*; it contains and determines the syntagmatic positions in A' *says'* x' *to* B' together with their semantic relations and implications. With its positions and their relations identified, the formula functions as the syntagmatic matrix of meaning. It immediately represents the 'constant of meaning' of verbs denoting speech act reference, i.e. the class criterion of their lexeme structure. Differences of meaning can be ascribed to its individual positions, *A'*, *B'*, *say'*, *x'*, that is, features specifically associated with them; these positions accordingly constitute the 'variables of meaning', which serve to set up feature classes accounting for further differentiation within the lexeme structures.

The feature class *variable say'* subsumes those verbs whose lexeme structure is characterized by aspects of the process of verbal transmission, as e.g. *shout*; the feature class *variable x'* contains those verbs whose lexeme structure reflects aspects of the piece of language code transmitted, as e.g. *confess*; and the feature classes *variable A'* and *variable B'*, respectively, comprise those verbs whose lexeme structure is to some degree conditioned by certain traits of these roles, as e.g. *grant* (*A'*) and *announce* (*B'*). Each of the feature classes serves for further differentiation.

The syntagmatic matrix of meaning immediately represents the reference to a single speech act only, and it immediately applies to verbs only. Other terms of speech act reference, as e.g. *statement*, *reportedly*, are seen as derived from sentences containing a verb of speech act reference as their predicate.

The reference to a single speech act has to be differentiated from the reference to a correlated speech act, as this distinction can be of relevance for the lexeme structure of certain verbs, as e.g. *answer*, *deny*. Yet another semantic condition that cannot immediately be ascribed to any of the 'variables of meaning' and their feature classes is accounted for within the range of the definition of *A' says' x' to B'* as the 'function' of the *speaker A*; among other aspects of this 'function' it may consist in his evaluation of the speech act referred to, and this evaluation may be negative, as e.g. with *preachify* or *sermonize*. These instances, however, are also covered by the matrix of meaning and its relation to the actual speech act.

2.3 Semantic Representation of Verb and Sentence

It is not only assumed that the 'constant of meaning' together with the differentiating features associated with the 'variables of meaning' represent the individual lexeme structure; but it is furthermore supposed that they also represent the syntax of the verb and its semantic conditions. The semantic representation of the verb and that of its sentence coincide, as the verb and its lexeme structure determine the sentence and its semantic representation. When this coincidence is violated by manipulating the semantic representation of the sentence, its interpretation becomes contradictory, as e.g. in:

(1a) *He shouted in a low voice: "Come here!".

(2a) *He confessed that he was not guilty.

The lexeme structures of *shout* and *confess* share the 'constant of meaning', they differ with respect to the variables that account for their additional semantic features. As for *shout*, these features can be associated with an aspect of the variable *say'*, more precisely, with a subclass of the type *voice* (*manner*/*volume*). A category like this is of no relevance for any other of the feature classes.

The lexeme structure of *confess*, on the other hand, is further determined by an aspect of the variable *x'*, an aspect which, more precisely, can be found in a subclass like *interpretation x'*, that is based on the meaning content of *x'*. When the *speaker A* interprets the meaning content in terms of an evaluative category of the type 'something concerning *A'* is negative for *A'*/*A'* has done sth. negative', *confess*, whose lexeme structure is seen as determined in this way, is one of the verbs to convey this type of interpretive meaning.

When the semantic representation of *x'* is integrated into the lexeme structure, as e.g. with *confess*, or when *x'* is considered in terms of its meaning content or its syntax, as e.g. with *shout*, *x'* will be taken account of as $=\underline{x}'_S$.

According to the membership of *shout* and *confess* in two different subclasses, namely *variable say'* and *variable x'*, respectively, the deviance of (1a) and (2a) is due to a violation of the respective categories in the semantic representation of these sentences. The semantic categories of the sentence adjusted to those of the verb, as shown in (1b) and (2b), the sentence is no longer contradictory:

(1b) He shouted (across the street): "Come here!".
(2b) He confessed that he was guilty.

Semantic features not found in the respective feature classes, can be added to the sentence without interfering with its semantic representation, that is, its coincidence with that of the verb. Thus, *shout* is neutral with respect to the variable *x'*; and *vice versa*, the semantic representation of *confess* is in no way conditioned by features of the variable *say'*:

(1c) He shouted that he was not guilty.
(1d) He shouted that he was guilty.
(2c) He confessed in a low voice that he was guilty.
(2d) He confessed loud and clear that he was guilty.

Although these 'additional' features are not determined by the feature class of the verb, that is, the specific variable, they certainly must not contradict the 'constant of meaning', the inherent part of the lexeme structure of *shout* as well as *confess*.

3.0 An Attempt at Classifying *say*, *speak*, *talk* and *tell*

3.1 Conditions of Classification within this Group

Whereas *shout* and *confess* can be assigned to their respective feature classes on fairly clear grounds, some of the four English verbs under consideration, together with possible lexical counterparts in German, show a certain variety of semantic features that at least in some cases asks for a corresponding variety of feature classes and subclasses which a single verb may have to be assigned to. In a case like this the verb has different lexeme structures, accounting for different semantic representations. On the other hand, two different verbs can — at least partly — share semantic features and may even be interchangeable; mere surface substitutions can, however, prompt different interpretations.

The proximity of variety and similarity then is a criterion for grouping these four English verbs together; another closely related criterion that to some degree may possibly account for their 'similarity' is the predominance of the 'constant of meaning' in some of these verbs and their lexeme structures. The verbs or those of their lexeme structures predominantly characterized by the 'constant of meaning' can be void of or nearly void of additional semantic features; this vacuum may permit then a variety, a restricted variety, of semantic representations within the range of this predominance.

Predominance of the 'constant of meaning' over the differentiating 'variables of meaning' has to be recognized as a semantic factor, which can cause semantic differentiation to be unstable and less clear cut. Still, semantic differentiation can be observed in these instances, too, and on these grounds they will be classified within the semantic feature system. Differentiating factors will be found in the feature classes *variable say'*, *variable* x', *variable* B', and in the distinction between single and correlated speech act reference.

3.2 Some Lexical Counterparts in German

Possible lexical counterparts of *say*, *speak*, *talk*, *tell* in German are *sagen*, *reden*, *sprechen*, *erzählen*, *sich unterhalten*, though they do not necessarily coincide in semantic range. The demonstration concentrates on the English verbs and their lexeme structures; they will be confronted with the German lexemes in particular instances of equivalence or contrast.

3.3 *Say*

Say is one of those verbs whose lexeme structure is dominated by the 'constant of meaning'; on the other hand its lexeme structure is thought to contain the bare minimum of features essential for speech act reference, so that this lexeme has been chosen to represent the semantic class. *Say* is grouped within the feature class *variable say'*, constituting a subclass of its own, *presentation* x'. This is the essential, if not the only differentiating feature, setting *say* apart even from those verbs that among other more specific features can have this feature as well. *Say* is neutral with respect to x', that is, x' has no share in the lexeme structure of *say*. The different surface realizations of x', as e.g. direct quotation or embedding by *that*+x'_S will not be taken account of.

Say will be viewed briefly under the following aspects: feature specification of *A'*; specification of *say* with respect to the 'channel' of *presentation x'* as either [+oral] or [+written]; the category of *voice* (*passive*).

A' can in general be characterized as [+person] or [+institution], when *A'* [+institution] represents a group of persons. Although the inherent specification for 'channel' is [+oral], *say* can be neutral with respect to 'channel', that is, it can refer to *presentation x'*, when this presentation makes use of the 'channel' [+written]. In these cases the present tense may be preferred.

(3) He said: "Pollution of the air is a threat to mankind".

(4) The Board of Directors said: "Pollution of the air is a threat to mankind".

(5) The author says: "Pollution of the air is a threat to mankind".

The subject position can also be occupied by a noun (or its pronoun) denoting a written product of *presentation x'*; this noun can in free variation also occur in the prepositional phrase *in*+NP, whereby *A'* then occupies the subject position:

(6a) Her brochure says: "Pollution of the air is a threat to mankind".

(6b) She says in her brochure: "Pollution of the air is a threat to mankind".

Still another class of nouns can occupy the subject position, but neither is free variation possible with the prepositional phrase *in*+NP, nor can *A'* occupy the subject position:

(7a) Statistics say that pollution of the air is a threat to mankind.

(7b) *He says in the statistics that pollution of the air is a threat to mankind.

Noun phrases like *statistics, symbolic representation, list*, do not refer to a speech act and *presentation x'*; they rather denote the presentation of some non-linguistic code. In this case *say* does not refer to a speech act, but to this type of presentation and its interpretation by the *speaker A*.

Two types of passive-constructions permit that *A'* need not be identified, though he may be:

(8a) He is said to be quiet.
(Jespersen 1933:343)

(8b) He is said by his teacher to be quiet.

(8c) It is said that he is quiet.

(8a) - (8c) are assumed to be reached at through several stages of derivation or transformation, which have as their starting-point the active-syntagma of *say*: *A' says x' to B'*, with a special device operating on *x'*, that is, its syntagma, too. For the active version of (8a) and (8c) cf. (8d):

(8d) They say that he is quiet.

A' in (8d) is anonymous. *A'* can be retained in the passive version, cf. (8b), possibly only when this position has been, or rather can be identified.

(8a) and (8c) are seen as further derived from a passive—syntagma *x' is said (by A')*, which can result in two different surface structures. In (8c) is embedded as the subject of the passive sentence, represented by the anticipatory pronoun *it*: "*It* is said that x'_s". In (8a), however, it is not x'_s that occupies the subject position, but NP as the (personal) subject of x'_s; in this case the verb phrase of *xs* is embedded as an infinitive phrase: "x—[+person] is said to+infinitive phrase (x'_s)". Jespersen (1933:343) recognizes the position here identified as x'_s and x'_s as "'split subject'", thus accounting for the embedding of *xs* into a construction "in which the subject plus an infinitive is in itself the subject of the main verb".

As far as the possible German counterpart is concerned, *sagen* shares the semantic feature specification *presentation* x' with *say*, although in contrast to *say* it is not restricted to this subclass within the feature class *variable say*', as can be seen later. With respect to 'channel', *sagen* before all has the specification [+oral], but may, however, also be neutral, as can be *say*; cf. (3) - (5). Whereas (6bb) can be seen as a German counterpart for (6b), a paraphrase relation as that between (6a) and (6b) does not hold for *sagen*, cf. (6aa) and (6bb):

(6aa) *Ihre Broschüre sagt: "Die Luftverschmutzung bedroht die Menschheit".

(6bb) Sie sagt in ihrer Broschüre: "Die Luftverschmutzung bedroht die Menschheit".

In the case where *A'* of *sagen* is not identified, either the passive is found with *x'* as its subject, represented by the 'anticipatory' pronoun *es*, cf. (8cc) as a possible equivalent for (8c), or the indefinite pronoun *man* refers in the active construction to *A'* anonymous, cf. (8dd) and the corresponding English construction—type (8d). With *A'* unidentified, in German another lexeme can be substituted for *sagen*, namely *erzählen* or *sich erzählen*, respectively, cf. (9a) and (9b).

(8cc) Es wird gesagt, daß er ruhig ist.

(9a) Es wird erzählt, daß er ruhig ist.

(8dd) Man sagt, daß er ruhig ist.

(9b) Man erzählt sich, daß er ruhig ist.

In German there is no equivalence for the construction-type (8a) and (8b), respectively.

3.4 *Speak* and *Talk*

Speak and *talk*, too, definitely belong to those verbs whose lexeme structure is predominated by the 'constant of meaning'; their lexeme structure thus allows for a certain variety of more or less unstable features. Though far from being synonymous, *speak* and *talk* share membership in a subclass of the feature class *variable say'*, whose differentiating feature is *verbal activity*. This feature is of principal relevance for the two verbs, in that it also dominates their further specifications; on the other hand, it also permits other features to determine them. Besides, *verbal activity* can in itself, that is, within this subclass, identify different features.

This shared membership implied, *speak* can, besides, be assigned to another subclass of the feature class *variable say'*, namely *faculty*; it can also be identified as a member of the feature class *variable B'*, with *B'* specified as [+public]. *Talk* in *talk to sb.* can be interpreted as referring to a correlated speech act.

By reason of this unstability, *speak* and *talk* are not described in terms of a feature analysis; instead they are confronted in some cases, this confrontation demonstrating either the deviance of one of two sentences confronted or a difference in sentence interpretation:

(10a) He can speak English.
(10b) *He can talk English.
(11a) He speaks English.
(11b) ≠ He talks English.
(12a) He spoke distinctly.
(12b) *He talked distinctly.
(13a) He is a good speaker.
(13b) ≠ He is a good talker.
(14a) He spoke to his friend.
(14b) ≠ He talked to his friend.

For *speak* in at least (10a) and (12a) the counterpart is *sprechen*, cf. (10aa) and (12aa); *speak*/*sprechen* in (10a) and (10aa) respectively, imply *faculty*, whereas *speak*/*sprechen* in (12a) and (12aa) respectively, refer to an aspect of *verbal activity*, that of articulation.

(10aa) Er kann Englisch sprechen.
(12aa) Er sprach deutlich.

The difference in the sentence interpretation of (11a) and (11b) is due to the different lexemes *speak* and *talk*, with *speak* here referring to *faculty*, and talk to verbal activity. In either case the counterpart may be *sprechen*, cf. (11aa) and (11bb); in (11bb) *reden* may be substituted for *sprechen*:

(11aa) Er spricht Englisch.
(11bb) Er spricht / redet Englisch.

Speaker in (13a) is derived from *speak* with the specification of *B'* as [+public]; its counterpart with reference to this feature specification is *reden* or *Redner*, respectively, cf. (13aa). The positive evaluation, cf. *good*, in (13a) refers to the quality of the speech act specified with respect to *B'* [+public]; in (13b), however, it implies quantity with reference to mere *verbal activity*.

Reden also covers this feature specification, collocating here with an adverb of quantity, cf. (13bb).

(13aa) Er ist ein guter Redner.

(13bb) Er redet viel.

A counterpart of the correlated speech act reference in (14b) is *sich unterhalten*, cf. (14bb). The speech act situation in (14a) is different; here *reden* and *sprechen* might be interchangeable within the *verbal activity*, with A' being the active part, cf. (14aa).

(14aa) Er redete / sprach mit seinem Freund.

(14bb) Er unterhielt sich mit seinem Freund.

3.5 *Tell*

According to different features involved, for *tell*, too ,there can be stated differences in its lexeme structure. In this case, however, the different features do not overlap, thus blurring the boundaries of class membership. Instead, they can be isolated rather clearly, accounting for the membership of *tell* in the two subclasses *verbal activity* and *information* B' of the feature class *variable say′* and a subclass of the feature class *variable* x', that can be identified as *qualification* x': A' *imperative towards* B'.

Without defining differentiation within the subclass *verbal activity* any further, *tell* in (15a) is ascribed to this subclass, or rather this subclass accounts for *tell*:

(15a) She told the children a fairy tale.

Another characteristic feature of *tell*, constituting one of its lexeme structures, is that it sets up a specific relation between A' and B', namely *information* B'. This feature is classified within the feature class *variable say′* on the grounds that x', carrying the information, is unconditioned in other respects, a criterion which *tell* of this specification shares with *say*. *Say*, however, is unrestricted in terms of *information* B', whereas *tell* is determined by this feature:

(16a) After they had been watching the intersection for several minutes, he said to them: "Traffic is rather heavy".

(16b) *After they had been watching the intersection for several minutes, he told them: "Traffic is rather heavy".

Thus, under the circumstances described in (16a) and (16b), *tell* is — in contrast to *say* — not acceptable, as x'_S does not contain any (new) information for B'. With respect to this feature the situation is reversed in (17a) and (17b); accordingly *tell* is the appropriate term to refer to the conveyance of x'_S:

(17a) As they did not know it yet, he told them that he had been offered the job.

(17b) +As they did not know it yet, he said to them that he had been offerred the job.

For *tell* denoting speech act reference, the meaning content of x_s', representing *information B'*, can either be retained or deleted in the surface structure. In case xs is retained, it can be represented by a quotation of x'_s, an embedding of x'_s by means of *that*, or by the *pro*-form *so*. In case the meaning content of x'_s is deleted, x'_s can be represented by NP, PP, or S_{Wh}-. In (18a) x'_s is retained, whereas in (18b) it is deleted:

(18a) He told them that he had arrived at 10 p.m.
(18b) He told them when he had arrived.

Tell of this specification not only refers to a speech act; it can be used with any noun as its subject that can serve as a source of information and is interpreted in this way:

(19a) His face told them that he was annoyed.

The third category for the lexeme structure of *tell* has been identified as *qualification x': A' imperative towards B'*. If x' is qualified in this way by the *speaker A'*, x'_s is embedded obligatorily as an infinitive phrase. The subject of x'_s is B', being the direct object of *tell*; cf. (20a). The passive version is (20b), with B' as its subject; A' is deleted.

(20a) He tells him to be quiet.
(20b) He is told to be quiet.
(Jespersen 1933: 343)

There is no single lexical equivalent in German that covers these different feature specifications of *tell*.

With reference to *verbal activity*, cf. (15a), *erzählen* would be the equivalent verb:

(15aa) Sie erzählte den Kindern ein Märchen.

In contrast to *say* that is seen as restricted to the subclass *presentation x'*, the lexeme structure of *sagen*, that can also be specified by this feature, is characterized by further differentiation. One of these specifications implies *information B'*.

These two different semantic specifications of *sagen* are matched by different construction-types. Whereas *sagen*+prepositional phrase (*to B'*) is to be interpreted as *presentation x'*, cf. (16aa), *sagen*+dative object (B') refers to *information B'*, cf. (17aa).

(16aa) Nachdem sie die Straßenkreuzung mehrere Minuten beobachtet hatten, sagte er zu ihnen: "Es herrscht ziemlich dichter Verkehr".
(16bb) *Nachdem sie die Straßenkreuzung mehrere Minuten beobachtet hatten, sagte er ihnen: "Es herrscht ziemlich dichter Verkehr".

As the situation stated in x_s' is obvious, the feature *information B'*, which is found in the construction *sagen*+dative object of (16bb), interferes with the interpretation of (16bb); cf. also (16b).

Reference to B' in the dative case, on the other hand, seems to be obligatory for a feature specificytion of *sagen* as *information B'*, cf. (17aa):

(17aa) Da sie es noch nicht wußten, sagte er ihnen, daß ihm die Stelle angeboten worden war.

(17bb)*Da sie es noch nicht wußten, sagte er zu ihnen, daß ihm die Stelle angeboten worden war.

Also with *sagen*, the meaning content of $x'S$ can be either retained, cf. (18aa), or deleted, cf. (18bb):

(18aa) Er sagte ihnen, dass er um 10 Uhr angekommen war.

(18bb) Er sagte ihnen, wann er angekommen war.

Sagen can also be used in order to refer to any source of information:

(19aa) Sein Gesicht sagte ihnen, daß er ärgerlich war.

In instances (17aa) - (19aa) *erzählen* might be used, too, though *sagen* is considered to represent the feature *information B'* more distinctly.

Sagen can also be used to convey a concept like *qualification x': A' imperative towards B'*; it is, however, not specified with respect to this feature so that additionally the modal verb *sollen* is used, here implying obligation; cf. (20aa). With *sagen*, x'_S is embedded by means of *that*. In the passive version, cf. (20bb), the subject is x'_S:

(20aa) Er sagt ihm, daß er ruhig sein soll.

(20bb) Ihm wird gesagt, daß er ruhig sein soll.

4. Conclusion.

Say, *speak*, *talk* and *tell* have at least partly been described in terms of the syntagmatic matrix of meaning. It has become obvious, too, that especially those verbs whose lexeme structure is predominated by the constant of meaning ask for a more refined system of semantic description. Besides being a linguistic goal in itself, confrontative analysis can help to demonstrate the categories of analysis.

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SYNTACTIC FUNCTION OF NEGATIVE PREFIXES IN ENGLISH AND POLISH PARTICIPIAL ADJECTIVES

Barbara Fedorowicz-Bacz

The Jagellonian University of Cracow

The commonest and the most productive negative prefix in English is undoubtedly the particle *un-*. Jespersen (1965: VI. 26. 16) observes that "while most of the *in-* words are settled once for all, and have to be learned by children as wholes, there is always a possibility of forming new words on the spur of the moment with the prefix *un-*".[1] Other negative prefixes such as *a-* (*amoral, asymmetric, atrophied, asexual*), *non-* (*non-existent, non-flammable, non-commisioned, non-nucleated*), *dis-* (*dishonest, discourtous, discoloured, disinterested*) and *in-* (*inauspicious, impossible, irrelevant, indebted*)[2] are considerably less frequent and by far less productive in Modern English. Their application is limited to small groups of words of restricted semantic spheres. Whereas the native, Germanic *un-* "is the regular prefix with adjectives belonging to the common vocabulary of the language" (Marchand 1960:21), the Greek *a-* is basically reserved for terms belonging to science (Cygan 1974:317), Romance *in-* forms negatives with "learned words of Latin and French origin" (Quirk 1972:982),[3] *dis-* occurs mainly in verbs and words with some inherent verbal idea (Jespersen 1930:126.53; Zandvoort 1966:294), and *non-* prefixes chiefly in nouns of action (Zandvoort: 1966:295; Cygan 1974:317). Since *un-* is the most important of English negative prefixes, and, what is of significance for the purposes of this paper, seems to be the most frequent English negative prefix added to adjectives, the discussion here will center around adjectives prefixed by negative *un-*.

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[1] Ample evidence supporting this observation can be found in the specific idiolect of a modern American poet E. E. Cummings whose well known language coinages expressing negative concepts are all prefixed by *un-*, e. g. *unpeople, manunkind*, etc.

[2] Negative *in-* should not be confused with intensifying *in-* of words such as e. g. *inflammable* (easily set on fire).

[3] In some words of Latin or French origin negative *un*-prefixed adjectives constitute derivational sources of *in*-prefixed nouns, as in *unable — inability, unjust — injustice, unequal — inequality*. Zandvoort (1966 : 298) suggests that this disparity of prefixes on the nouns here (*-ty, -ice*) shows the Latin origin of the word more clearly.

It has to be made clear at the beginning that there are two *un-* prefixes in English which differ in their semantic function and syntactic distribution: a) negative *un-* and b) privative *un-*. Prefixation by negative *un-* produces the semantic effect of simple negation of the meaning expressed by the stem to which the prefix attaches (*unjust, unforgettable, unreported*) whereas derivatives with privative *un-* denote actions which are reversals of the actions designated by the stems of the words in question (*unbutton, undress, unlock*). As to the distribution of the two *un-* prefixes it can be observed that negative *un-* shows up surfacedly on lexical adjectives (*unhappy, unthinkable*), nouns (*untruth, unkindness*), adverbs (*ungracefully, unfortunately*) and participial forms such as *uninhabited, unbroken*, whereas privative *un-* occurs in verbs (*undo, unsaddle, unleash*).

In an unpublished 1971 paper Dorothy Siegel suggests that all words prefixed by negative *un-* have to contain an adjective somewhere in their derivation. Indeed, it can be observed that negative *un-* prefixed nouns and adverbs are all derived from the corresponding *un-* adjectives, cf. *unkindness* (n) — *unkind* (adj), *unfortunately* (adv) — *unfortunate* (adj). That explains why in the lexicon of English we do not find items such as **unyouth*, **ungoodness*, **ungaily*, etc., which would have had to be derived from non-existent adjectives **unyoung*, **ungood*, and **ungay*, respectively.

Since both negative *un-* and privative *un-* can appear on participial forms in *-ed*, ambiguity between the two kinds of *un-* participles can be expected, especially that both can occur as attributive modifiers in NP's, cf., *an unpublished paper* (negative *un-*) versus *an unbuttoned shirt* (privative *un-*). In spite of their surface structure similarity participial forms prefixed by negative *un-* differ syntactically from participial forms prefixed by privative *un-*. It can be shown that the former belong to the class of adjectives and the latter to the class of verbs. In this paper I will try to offer syntactic arguments in order to prove that negatively *un-* prefixed participial forms such as *uninhabited, unpublished*, etc. are not verbal participles but adjectives.

Words which have the morphological structure such as verbal participles ended in *-ed* and *-ing* and at the same time manifest syntactic properties typical of lexical adjectives are, in linguistic literature, sometimes referred to as "participial adjectives", and this is the term I am going to adopt in the present discussion.[4] Participial adjectives, which are derivatives from verbs, should be distinguished from adjectives in *-ed* derived from nouns, such as e. g. *(un)cultured, talented, old-fashioned, blue-eyed, (un)skilled* etc., which obviously cannot be treated as verbal participles as they have no corresponding verbs such as **(un)culture, *talent, *old-fashion*, etc. Participial adjectives exhibit adjective characteristics to the extent that: 1) they occur in attributive and/or predicative position, e. g. *the diseased lung — the lung is diseased, an interesting book — the book is interesting*, 2) they may be premodified by *very*, e. g. *his very diseased lung, a very interesting book*, 3) they may occur in *more ... than* structures of comparison, e. g. *she is more offended than heart-broken, the result was more surprising than predicted.*

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[4] This term is used by Dorothy Siegel (1971) to denote items such as *uncollected, uninhabited*, etc. For a discussion of English participial adjectives see Quirk (1972 : 242-246).

The formal criteria given above cannot be treated as absolute and unfailing tests indicating the adjective status of the words in question. Very often, especially when they appear in predicative position, and no disambiguating factors are present in the sentence, ambiguity may result since particular *-ed* or *-ing* items can be interpreted as either participial adjectives or verbal participles, the meaning of the sentence depending on the presupposition in the mind of the speaker or his intended meaning which has not been expressed verbally in a clear-enough way. Cf. the following examples,[5]

1. a. She is (very) calculating (but her husband is frank) — adj.
   b. She is calculating (now). (Don't disturb her) — participle
2. a. They were (very) relieved (to find her at home) — adj.
   b. They were relieved (by the next group of sentries) — part.
3. a. It is (absolutely) freezing (i.e. very cold) — adj.
   b. It is freezing (i.e. becoming frozen) — part.
4. a. It is (absolutely) boiling (i.e. very hot) — adj.
   b. It is boiling (i.e. becoming gaseous) — part.
5. a. The man was offended. (He looked very cross) — adj.
   b. The man was offended (by her behaviour), — part.

It may be said that the interpretation of ambiguous sentences like these above depends on their verbal or adjectival focus, which is determined in the mind of the speaker. Some grammarians explain the difference between the two interpretations solely in semantic terms, maintaining that adjective interpretation should be given when the state resulting from the process is meant, and participle interpretation, when the process is emphasized.

Quirk (1972) proposes, a *seem*-test for discovering the adjective status of a lexical item in predicative position. He observes that in ambiguous sentences like these above, *be* can be replaced by *seem* only in examples a), i.e. the ones with adjectives. The *seem*-test, however, is not very helpful when an interpretation of *-ed* or *-ing* words occurring in attributive position is needed, for e. g. the attributive modifier *faded* in NP *faded curtains* can have two derivational sources: participial *the curtains have faded* or adjectival *the curtains are/seem faded*. L. Horn in his 1973 dissertation introduces an *absolutely*—test to distinguish adjectives from participles. The intensifier *absolutely* can be inserted only in front of adjectives. This test, which seems to be another version of the well known *very*—premodification test, is successful when applied to ambiguous attributive items, cf. *those absolutely faded curtains — those curtains are absolutely faded,* those curtains have absolutely faded.*

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[5] These examples are taken from Quirk (1972 : 244) and Horn (1973).

Some of the attributive forms in *-ed* have no corresponding verbs and this feature clearly excludes them from the class of verbal participles. The lack of the corresponding infinitival form is an unfailing signal of the category of adjective in the case of morphological participles which are derivatives from nouns such as (*un*) *skilled*, *talented*, and of *un*-prefixed deverbal participial forms such as *uncollected*, *unassuming* for neither of them have underlying infinitives, cf., *(*un*)*skill*, **talent*, **uncollect*, **unassume*.

Another unfailing feature defining participial adjectives in *-ed* (including these which have corresponding infinitive forms) is the impossibility of a passive interpretation. Participial adjectives cannot or may not be interpreted as passive counterparts of well formed active sentences because they either (1) do not have the corresponding verb, e. g. in *his talented friend — *his friend was talented by someone — *to talent*, or (2) the corresponding verb is typically intransitive as in *the escaped prisoner — *the priosner is escaped by someone*, or (3) the passive interpretation is semantically impossible or not obligatory, e. g. *a grown boy — *a boy who is/has been grown up by someone, a boy who has grown up* (Quirk 1972: 243).

Negative *un*- prefixed participial forms in *-ed* which are under scrutiny in this paper have to be included in the class of participial adjectives since their formal characteristic complies with the list of features outlined above. Specifically, 1) they have no corresponding infinitive forms, e. g. *unexpected guests — *unexpect*, 2) they cannot be interpreted as passives since there are no well-formed active sentences from which they could have been derived, cf., *unexpected guests — *these guests were unexpected by John, *John unexpected these guests; uninhabited area — *this area is uninhabited by man, *man uninhabits this area*, 3) some of them can be premodified by an intensifier such as *very* or *absolutely*, e. g. *those absolutely unexpected guests* (but not **this very unwritten letter*), 4) they occur in attributive and/or predicative position, e g., *uninhabited area — this area is uninhabited*.

A few observations can be made concerning the relation between the *un*-prefixed participial forms and their possible positive counterparts. In the cases when negative *un*-prefixed participial modifiers are participial adjectives, their positive counterparts are verbal participles occurring in unprefixed *-ed* forms, e. g. *the* (*very*) *unexpected guests* (adj), but *the* (**very*) *expected guests* (verb); *the* (*absolutely*) *uninhabited area* (adj.) but *the* (**absolutely*) *inhabited area* (verb). One could generalize this observation by saiyng that in the case of *-ed* participles, prefixation by negative *un-*, which is a morphological operation, causes a change of the *syntactic* category of the item in question by shifting the word from the lexical class of verbs to that of adjectives. There are, however, instances of *un*-prefixed participial adjectives which have no corresponding positive counterparts that would occur in unprefixed *-ed* forms, cf., *an unheeded problem* but **a heeded problem*, *an unheard-of demonstration* but **a heard-of demonstration*. In such cases the function of negative prefixation by *un-* can be described as that of conferring acceptability on a participial form in question.[6]

On the level of semantics prefixation by negative *un-* results in simple negation of the meaning of the stem in question. In terms of logic this process would be described as $p \rightarrow \sim p$.

It is intuitively felt that semantically, participial adjectives like *unexpected* correspond to negated participles like *not expected* but differences in syntactic properties between the two imply that there must be a difference in meaning introduced by the morphological operation of prefixation by *un-*. The differences in syntactic properties between negated participial adjectives and the corresponding participles will be brought to light when premodification by *very* and Klima's (1964) question tag test for negation are applied, cf., (a) *very unexpected* but not **not very expected*, **very not expected*; (b) *these guests were unexpected, weren't they?* but not **these guests were not expected, weren't they?* Semantic differences between these two forms of negation (*un*-negation and *not*-negation) require a close scrutiny. D. Siegel (1971) suggests that when *un-* and *not* appear immediately before non-gradable participial adjectives (i. e. adjectives which cannot be premodified by *very*) both forms are practically synonymous, whereas when *un-* and *not* precede participial adjectives which can be graded, a difference in meaning between the two forms can be observed. Indeed, ungradable *unhated* seems to be semantically identical to *not hated*, *unafraid* to *not afraid*, *unmoved* to *not moved*, while gradable *not complicated* seems to assume a greater degree of complication than *uncomplicated* and *not satisfied* is necessarily *unsatisfied* (e. g. the demand not satisfied is necessarily unsatisfied), but the converse is not true. It seems that in forms negated by *not* the presence of an agent is presupposed, i.e. *not complicated* is in fact understood as *not complicated by someone* whereas in *un*-negated forms the agent is not important, the state being exposed. The semantic difference between the *not* and *un*-negated members of relevant pairs of participial adjectives will be seen more clearly when an intensifier such as *very* or *completely* is inserted, cf., *not very complicated* does not mean *very uncomplicated*, *not completely satisfied* is not *completely unsatisfied*, etc.

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[6] It is assumed that the derivation of negative *un*-prefixed participial adjectives starts from the positive infinitival form and develops through *-ed*-suffixation to prefixation by *un-* which is the final operation, e.g. *unexpected = expect → expected → unexpected*, not *expect = *unexpect → unexpected*. Examples such as *unheeded* may constitute a problem for this line of derivation of negated participial adjectives as the lexicon of English does not contain positive *-ed* participles such as **heeded*. Since there is no infinitival form **to unheed*, neither of the two possible derivations of this item can be preferred, cf. *unheeded = *heed → *heeded → unheeded* or *unheeded = *heed → *unheed → unheeded*. Thus, *unheeded* does not constitute a valid counterexample to the derivation of participial adjectives proposed here.

These semantic observations and comments have been made here only in order to enlarge on the syntactic characteristics of English *un*-negated participial adjectives given before. I believe that syntactic arguments given here are sufficient to maintain that *un*-prefixed English *-ed* participial forms are adjectives.

In the following part of this paper I will examine negated participial adjectives in Polish and discuss the relation between English *un*-negated participial adjectives and negated participial adjectives in Polish.

There are two major negative prefixes in Polish that attach to adjectives, *nie-* (*nieladny*, *nieprzejrzany*, *niespodziewany*) and *bez-* (*bezładny*, *bezbronny*; *bezbrzeżny*). Since *bez-* does not appear on participial forms (there are no examples such as **bezmyślący* or **bezspodziewany*) and has no corresponding prefix in English, *bez*-prefixed lexical items being rendered by means of adjectives with the suffix *-less* or by prepositional phrases with the preposition *without* (cf., *beznadziejny — hopeless*, *bezbronny — without weapon*) *bez-* negation will be disregarded in the present study.

The negative prefix *nie-* is the only Polish equivalent of the English negative prefix *un-* (as well as of the negative *in-*). In his contrastive classification of Polish negative exponents J. Cygan (1974:299, 314) includes this *nie-* into the group of exponents of what he calls "special (lexical) negation". As a morphological unit Polish *nie* is much more universal than English *un-*, for besides functioning as a negative prefix equivalent of the English *un-* as in *nieszczęśliwy — unhappy*, *nieoczekiwany — unexpected* it serves as an exponent of sentence negation, equivalent of the English *not* (*n't*) as in *człowiek nie mówiący po angielsku — a man who does not* (*dosen't*) *speak English*; *Nie pal. — Don't smoke.*, or as the lexical substitute for a negative answer (absolute negation), an equivalent of English *no*, as in: *Czy idziesz ze mną? Nie! — Are you coming with me? No!* Discussing Polish *nie-* Cygan (1974:314) states that "the negative particle and the word it negatives are felt strongly to belong to each other, and can in fact as a whole always be replaced by another word of synonymous meaning but positive in form". This fact is reflected in Polish orthography for according to the general orthographic rule in Polish *nie-* has to be spelt jointly with adjectives (*nielatwy*, *nieladny* with positive synonyms *trudny* and *brzydki*, respectively), nouns (*nieprzyjaciel*, *niepokój* with synonyms *wróg, podniecenie*), deadjectival adverbs (*niełatwo — trudno, nieładnie — brzydko*) and adjectival participles (*nieokreślony — szary, bezbarwny, nieoczekiwany — nagły, niespodziewany — zaskakujący*) but not with *verbs* (**niepisać, *nietańczyć*). (For the formulation of the rule and discussion see Jodłowski and Taszycki 1974:50-53).[7] This generalization about the surface distribution of *nie-* in Polish, when compared with the generalization concerning the possibilities of prefixation by *un-* in English will bring out certain differences and similarities between the two languages. Whereas in English negative *un-* can attach to nouns only if they are derived from *un*-prefixed adjectives, Polish nouns prefixed by *nie-* do not need to have corresponding *nie*-adjectives since *nie-* can be freely prefixed to underived nouns, cf. *nieśmiałość — nieśmiały, nieprzyjaciel — nieprzyjacielski* but *niedola — *niedolny, niewola — *niewolny*, etc. In the case of negated adverbs the same generalization applies to both languages for Polish *nie-*, just as English *un-*, appears only on adverbs derived from negated adjectives, cf., *nieudolny — nieudolnie, nieładny — nieładnie*, but **niesprytny — *niesprytnie, *nieziemny — *niezimno*. Like in English, problems arise in the case of negated items which have the morphological form of the so-called participles in *-ny, -na, -ne, -ty, -ta, -te, -ący, -ące, -ąca*, "imiesłowy przymiotne czynne i bierne"). In the grammar of Polish an a priori functional distinction is made between negated adjectival participles functioning as verbs ("imiesłowy przymiotne w funkcji czasownika") and negated adjectival participles functioning as adjectives ("imiesłowy przymiotne w funkcji przymiotnika") (see e.g. Jodłowski and Taszycki 1974:51). The difference between the two kinds of negated participial forms is reflected in Polish orthography where a much troublesome rule prescribes a joint spelling of the particle *nie-* with adjectival participles functioning as adjectives and disjoint spelling of *nie-* with adjectival participles functioning as verbs, cf.,

nie+ustający — a) Lał deszcz, *nie ustający* od godziny.
b) Rada *Nieustającej* Pomocy
nie+nasycony a) Gąbka, *nie nasycona* wodą, zeschła na kość.
b) *nienasycony* apetyt
nie+palący a) Osobom, *nie palącym* w tej chwili, podano ciasto.
b) W przedziale było trzech *niepalących*.

Polish negated adjectival participles in the function of verbs (examples a) correspond to English negated verbal participles, and negated adjectival participles in the function of adjectives (examples b) to English participial adjectives. From now on the uniform terms "verbal participle" and "participial adjective" will be used in reference to relevant participial forms in both languages. Whereas in English negated participial adjectives differ from the corresponding verbal participles structurally, the former being negated by *un-* and the latter by *not*, in Polish negated participial forms are ambiguous, for *nie* is the negator in both cases. In fact, the formal difference between negated participial adjectives and homonymous verbal participles is seen only in spelling for on the level of phonology both *nie-* and *nie* are treated alike, as unstressed proclitics of the following word. In spite of the fact that the distinction between participial adjectives and homonymous verbal participles in Polish is made in semantic terms (the function of a given negated participial form has to be "felt" as adjectival or verbal) it is possible to construct some formal tests to distinguish the two categories. The task, however, is more difficult than in English.

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[7] There are a few expections to this rule in the case of such verbs as *niepokoić* (disturb), *(z)niewolić* (enslave), *niedomagać* (be unfit), *niedowidzieć* (not to see well), *nienawidzić* (hate) but they do not constitue counterevidence to the generalization as formulated for there are historical and/or semantic reasons accounting for the joint spelling with *nie-* in each case (see Jodłowski and Taszycki 1974 : 50).

In English NP's *un*-negated participial adjectives can occur prenominally, e. g. *the unexpected guests*, whereas negated verbal participles have to follow the head noun, cf., *the visitor, not expected today* but not **the not expected today visitor*. In Polish, unlike in English, both the *nie*-negated participial adjectives and the *nie* negated verbal participles can appear as attributive prenominal modifiers, cf.,

6. a. *nieoceniona* pomoc — invaluable help
   b. *nie oceniona* przez komisję praca — the work, not evaluated by the committee
7. a. *nieznany pisarz* — an unknown writer
   b. nikomu *nie znany* pisarz — the writer not known to anybody
8. a. *nieoczekiwany* gość — the unexpected guest
   b. przez nikogo *nie oczekiwane* zakończenie — the end, not expected by anybody

In predicative position, however, Polish verbal participles are always separated from the negator *nie* by means of the copulative verb *być, zostać, zdawać się* whereas *nie*-negated participial adjectives, if they appear in predicative position at all, have to follow the copulative verb and the negator *nie-* cannot be detached from the participial adjective it prefixes without a change in meaning, cf.,

Verbal participles:

9. nie oceniona praca — praca, która nie została oceniona
   *która została nie oceniona
10. nie wykształcona (w pełni) kończyna — kończyna, która nie została wykształcona
    *która została nie wykształcona

11. nie znane jej otoczenie — otoczenie,które nie było jej znane
*które było jej nie znane
12. nie zbadany pacjent — pacjent, który nie został zbadany
*który został nie zbadany

Participial adjectives:

13. nieoceniony wysiłek — jego wysiłek zdaje się nieoceniony (bardzo cenny)
≠ jego wysiłek nie jest oceniony
14. nieznany autor — autor, który jest nieznany (anonimowy)
≠ autor, który nie jest/nie wydaje się znany
15. nienasycony apetyt — jego apetyt wydaje się nienasycony (bez dna)
≠ apetyt nie wydaje się (jeszcze) nasycony
16. niezatarte ślady — te ślady są niezatarte (trwałe)
≠ ślady nie są zatarte

As can be seen in examples above *nie*-negated participial adjectives can be substituted by synonymous words (predominantly lexical adjectives) positive in their morphological form which have been indicated in brackets. Such substitution is not possible in the case of negated verbs and verbal participles.

Similarly to English participial adjectives, negated participial adjectives in Polish have no corresponding infinitive forms, e. g. *niezdobyta twierdza* — **niezdobyć* (cf. *uninhabited house* — **uninhabit*) and cannot be interpreted as passives since they do not co-occur with *przez*—agents and have no underlying active sentence sources, e. g. *nieokreślony wyraz twarzy* — **wyraz jej twarzy był nieokreślony przez kogoś* — **ktoś nieokreślił wyraz(u) jej twarzy* (cf. *the unwritten letter* — **the letter was unwritten by John* — **John unwrote the letter*). Negated verbal participles have corresponding infinitives, e. g. *nie palący w tej chwili mężczyzna to mój wujek* — *(nie) palić*, and can be interpreted as passive counterparts of underlying active sentences, cf., *ten, nie przerwany przez Jasia sznurek* — *sznurek nie zostal przerwany przez Jasia* — *Jaś nie przerwal sznurka*. Polish participial adjectives can be and often are premodified by intensifiers such as: *absolutnie*, *kompletnie*, *zupelnie*, *calkiem* but they do not co-occur with the word *wcale*, e. g.

absolutnie nieoceniona pomoc (bezcenna)
**wcale* ,, ,, ,,
zupelnie niesłychane wydarzenie
**wcale* ,, ,, ,,

Negated verbal participles can easily co-occur with *wcale* but on the whole they do not admit of intensifiers such as *absolutnie* and *calkiem*, cf., *myśl wcale/zupelnie nie wypowiedziana*, *artykul zupelnie/wcale nie napisany* but **absolutnie niewypowiedziane bogactwa*, **calkiem niezgłębiona tajemnica*.

I believe that the above discussion has shown that Polish negated participial forms in *-ny-*, *-na*, *-ne*, *-ty*, *-ta*, *-te* should be treated as adjectives not only because of their adjectival meaning but also because of their syntactic properties which distinguish them from the category of verbal participles.

A few semantic comments concerning Polish negated participial adjectives will now be made. It can be observed that through prefixation by *nie-* Polish adjectival participles (imiesłowy przymiotne bierne) often acquire a completely new meaning, different from the meaning of the underlying verbal stem and the corresponding verbal participle negated by *nie*. They can have the meaning of a morphologically unrelated adjective, positive in connotation, which can be used as a semantic substitute for a given negated participial adjective, or they carry the meaning which can be expressed by the *impossible-to-V* structure where V stands for the underlying verbal stem. Cf. some examples of these two semantic groups of participial adjectives in Polish:

I. *Negated participial adj.*	*Negated participle*	*Underlying verb*
nieskomplikowany (simple)	nie skomplikowany (not complicated)	skomplikować (complicate)
nieopisany (unusual, extraordinary)	nie opisany (not described)	opisać (describe)
nieprzejrzany (vast)	nie przejrzany (not surveyed)	przejrzeć (survey)
nieprzerwany (continuous, unbroken)	nie przerwany (unbroken)	przerwać (break)
nieoczekiwany (sudden, unexpected)	nie oczekiwany (not expected)	oczekiwać (expect)
II.		
nieoceniony (invaluable, impossible to evaluate)	nie oceniony (not evaluated)	oceniać (evaluate)
niewypowiedziany (impossible to express)	nie wypowiedziany (not voiced)	wypowiedzieć (say)
niezapomniany (unforgettable)	nie zapomniany (not forgotten)	zapominać (forget)
niezbadany (impossible to examine)	nie zbadany (not examined)	zbadać (examine)
niepokonany (impossible to defeat)	nie pokonany (not defeated)	pokonać (defeat)

The semantic difference between negated participial adjectives of group I and the corresponding negated participles will be better seen if intensifiers such as *bardzo/wcale* and *zupełnie* can be inserted, e. g. *zupełnie/wcale nieoczekiwany* does not mean *niezupełnie/niebardzo oczekiwany*, *zupełnie nieskomplikowany* is not *niezupełnie skomplikowany*, etc. It can be observed at this point that D. Siegel's generalization that a semantic difference between English *un-*

and *not* negated participial adjectives is found only if a given adjective can be premodified by an intensifier such as *very* does not apply to Polish for Polish participial adjectives of group I do not have to be gradable, cf. **bardzo/zupełnie nieopisany*,**bardzo/zupełnie nieprzejrzany* but *zupełnie nieskomplikowany, zupełnie nieoczekiwany*.

As to participial adjectives of group II (impossible-to-V) it may be noticed that they correspond to English lexical adjectives in *-able* which are derivatives from verbs (for a discussion of *un-V-able*-adjective see Chapin (1970:58).

To sum up the most important points and observations made in this paper about negatively prefixed participial adjectives which occur in English and Polish NP's the following statements can be made by way of conclusion:[8]

a) English *un*-negated *-ed* participial forms and Polish *nie-* negated adjectival participles in *-ny, -na, -ne, -ty, -ta, -te* appearing in attributive position should be treated as participial adjectives and not verbal participles not only because of their semantic function but also because of their syntactic properties which distinguish them from verbal participles and tie them up with the category of adjectives.

b) In the process of negation by means of negative prefixes *un-* and *nie-*, in English and Polish respectively, verbal participles (whether actually occurring in language or merely hypothetical) change their syntactic category and become adjectives. This consequence is the syntactic function of the morphological operation of negative prefixation.

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[8] The discussion and conclusions of this paper are consciously limited to negatively prefixed participial adjectives appearing in attributive position for English *un*-prefixed participial forms used non-attributively do not have to be adjectival in their function. Examining English equivalents of negated adverbial participles in Polish, Grala (1974 : : 287) distinguishes as a special type of equivalents English "past participles and adjectives with negative prefix *uh-*" by which she means the same morphological forms as those considered in the present paper but occurring in non-attributive function being used as the traditional free adjuncts. In her Polish-to-English approach items such as *unmoved*, *unafraid* (see her examples 25, 26 in Grala (1974 : 287) are treated as negative past participles equivalent of Polish "adverbial particles" (imiesłowy przysłówkowe) *nie wzruszywszy się, nie obawiając się*. Cf. her example 25: *Nie wzruszywszy się jej sytuacją odmówił pomocy — Unmoved by her situation, he refused to help*. If English-to-Polish direction of contrastive analysis were applied here, the *un*-prefixed participial forms in question could be treated as ambiguous, for the English example quoted here can equally well be intepreted as a translation equivalent of the Polish sentence: *Nie poruszony* (*nie wzruszony*) *jej sytuacją, odmówił pomocy* with the negated item *unmoved* rendering Polish adjectival participle (imiesłów przymiotnikowy) *nie poruszony* used in the function of a verb (in the terminology of this paper, a negated participle). This possibility of a double (adjectival and adverbial) translation of English *un*-prefixed participial forms into Polish does not show that non-attributive participial forms in English are not adjectives. It may be taken to suggest, however, that English negated participial adjectives can be ambiguous as to their perfective or non-perfective aspect, which should be taken into consideration in a more detailed study (e. g. *unmoved* here can be intepreted as a) *is not moved* or b) *has not been moved*).

c) English negatively prefixed participial adjectives and the corresponding negated participles differ in their surface structure distribution, for *un*-participial adjectives can occur in prenominal position in NP's whereas *not*- negated verbal participles cannot. Negatively prefixed participial adjectives in Polish and the homonymous verbal participles negated by *nie* can both appear as prenominal modifiers in NP's.

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TEACHING ENGLISH ARTICULATORY SETTINGS TO POLISH LEARNERS

JANINA OZGA

The Jagellonian University of Cracow

This paper presents the results of an experiment whose ultimate purpose is to demonstrate the importance of the concept of "articulatory basis" for the teaching of the foreign language pronunciation. One such experiment has already been reported in Kolosov (1971); that report as well as a number of other publications (e. g. Honikman (1964), Kelz (1971) and works quoted therein) have stressed the need for including in the pronunciation drills some pre-orientating articulatory exercises which would help the learners to acquire the general articulatory setting of the target language and consequently to achieve a more natural, "accentless" pronunciation, which the acquisition of the target articulatory basis ensures by definition (articulatory basis is "the system of characteristic articulatory movements of a given language that confer upon it its general phonetic aspect", Marouzeau (1943:38).

The languages involved in the experiment were Polish (native) and English (target). Hence, its more immediate purpose was to test the adequacy of the descriptions of the English and Polish articulatory bases as presented by this author in another paper (Ozga 1976) and underlying the training which was to give the learners the postulated phonetic accuracy and naturalness. The reasoning behind the above statement is a follows: if the descriptions in question are adequate, the drills based on them ought to give the learners in the experimental group a better mastery of English pronunciation[1] than that demonstrated by the learners in the control group, whose instruction would not include such drills. Note, however, that the reverse is not automatically true: if the achievement of the experimental group is not found to be more pronounced than that of the control group, it may merely point to some fault in the preparation of the drills but not necessarily invalidate the descriptions underlying them. Thus, it is not only the principle that is being tested but also, and more directly, the technique.[2]

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[1] In terms of phonetic accuracy and naturalness, not in terms of phonetic distinctions.

In Ozga (1976) the Polish and English articulatory bases were described and compared, for the most part within the framework suggested in Honikman (1964). The main points of that presentation are briefly summarized in table form below:

TABLE 1.
ARTICULATORY SETTINGS

EXTERNAL	ENGLISH	POLISH
Jaws	little mobility	pronounced mobility
	non-extensive, non-energetic movements	extensive movements from clenching to large aperture
	small aperture — loosely closed	
Lips	neutral, slightly and loosely apart, slightly cornered, moderate mobility	pronounced mobility, tense, pressure against the molars
Cheeks	neutral and relaxed	intermittently dimpled and elongated
INTERNAL		
Main active articulator	apex	predorsum/blade
Anchorage	laterally to the roof	apex against lower front teeth
Body of tongue	concave	convex
Glottis (Over-all muscular effort)	devoicing (lenis articulation)	full voicing (energetic articulation)

To effect the transition from the Polish to the English basis a set of pronunciation drills was incorporated into the programme of instruction of the experimental group. These were of two types:

1. early stage drills — pronouncing selected Polish utterances with the introduction of an increasing number of the features of the English basis. A separate class was devoted to the discussion and drilling of each new feature. The procedure was as follows:

   Step 1. Teacher's description of the feature (e. g. English lip-and-cheek setting)

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[2] It may be sufficient to alter the technique without alterning the principle, but a failure of more than one technique based on the same principle would, to my mind, point to an inadequacy in the principle itself.

Step 2. Teacher's demonstration in "silent articulation" (where possible)

Step 3. Students' imitation in "silent articulation"

Step 4. Teacher's demonstartion of the difference between the English setting and the corresponding Polish one. In lip-and-cheek control, for instance, the difference was shown by pronouncing Polish words like *dziękuję* [dʑeŋˈkuje] in the native way and then with "stiff and sore" lips, which reduced the lip movement [dʑeŋˈkʊje]

Step 5. Students' imitation and teacher's correction

Step 6. Practice in utterances of increasing complexity

Step 7. Integrating the newly learnt feature into the system of the ones learnt previously, e. g. superimposing lip setting on glottal setting:

The features were introduced in the order given on p. 2, i.e. in what seems to be the order of difficulty (from cruder, directly observable features to finer kinesthetic distinctions), except that glottal and over-all muscular control were the subject of the very first drill. In spite of the difficulty that the glottal control exercises presented to the learners, this arrangement was found to be psychologically well-motivated; when the feature was mastered, the learners' performance improved perceptibly, their speech becoming more controlled and subdued, which was precisely the effect that the entire course was striving to achieve, since it constitutes the essential difference between the "sound" of English and Polish.

After all the features had been introduced, they were drilled in isolation and together on Polish material of increasing complexity.

An example of the early stage drills is given below:

Step 1. Glottal and muscular control: devoiced, non-energetic, breathy articulation, similar to that of the Upper Silesia dialect of Polish
[ˈd̥ʑisiaj ˈpada ɕneg]

Step 2. Jaw, lip, and cheek control: flattening out the vowels
[ˈd̥ʑisiəj pædə ɕɲeg]

Step 3. Tongue setting: limited motion of the vocal tract throughout the utterance
[ˈdʑisiəi pædə ˈɕɲeg]

Step 4. Anglicizing segments where possible
[ˈdʒiʃəi pʰædə ɕˈʃneg]

2. later stage drills — pronouncing English utterances of increasing length and complexity with the organs of speech in the English gear. Unlike the drills in 1) where the transition to the final stage of "speaking Polish with an English accent" was fairly smooth, these were a problem to the learners who complained, at first, of discomfort and even pain in

the process of speaking with the English articulatory gear, even though the utterances were graded not only in respect of complexity, but also in respect of compliance with the over-all articulatory tendency of the language, so that e. g. *The bed was empty*, with all vowels in the half-close to half-open region and predominant denti-alveolar articulation of consonants, would be introduced much earlier than *John yawned and began to laugh*, with a wider vowel and consonant range, which made it more difficult to maintain the articulatory setting described in Table 1.

Nothing has so far been said about the learners who participated in the experiment. They were first year students of English philology: 16 subjects in the experimental group and 16 in the control group. The experiment was conducted in the Institute of English, Jagellonian University of Cracow, during the English phonetics course given by the present author. The course lasted for 15 weeks (the first semester of the academic year 1974 - 75) with one 45-minute period a week (which amounts to c. 11 hours of instruction altogether). Apart from those classes both groups had a laboratory programme in phonetics (English vowels and consonants) — also one period a week with another teacher.

For both groups the phonetics courses (in class and in the lab) were of remedial nature. English vowels and consonants were described and practised; some most important suprasegmental features were introduced (e. g. proper phrasing and pausing were extensively trained). The experimental group had the additional training connected with the acquisition of the English articulatory basis, which shortened the time alloted to particular sounds. Both groups were taught in comparable, not to say identical, conditions.

To see whether there was any difference in the achievement of the control and experimental groups the following test was given to both groups before and after the course: each student was asked to read aloud a simple text from Smólska and Zawadzka's English textbook for Polish grammar schools "*We learn English*", Book I for the first form,[3] p. 219. The students were allowed to have a look at the text and practise for a short time before the reading. All the students were recoredered on SHIRA CT cassette tape-recorder. The students' performance was judged by five competent listeners (university teachers of English — 2 Britishers, 3 Poles), who were asked to grade the over-all impression of the quality of pronunciation according to the following scale:

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[3] The full text reads as follows:

"Mrs Wilson is quite alone in the house for once. Dr Wilson is out on his rounds. Susan has gone to another rehearsal, Peter is playing football and Robert has gone to see Joan.

Mrs Wilson is thinking about her family and she is a little bit worried.

All is well with Robert. He has just done well in a difficult examination and Mrs Wilson likes his girl-friend Joan very much.

But Peter… Peter is a very clever boy, but he dosen't work enough. He is interested in geography and maths, but he doesn't like French and he is not at all good at it. Susan says he reads very little. Peter spends a lot of time with Mike. They play football all the time. Peter is growing so fast… He doesn't eat enough. He must have another egg every morning. And Mrs Wilson must talk to his French teacher.

Susan is a good girl and she is pretty. She looks very nice in her new blue dress. But she doesn't want to wear her red school blazer. She says she looks awful in it.

0 — poor, 1 — fair-to-middlin', 2 — fairly good,
3 — good, 4 — very good

The listeners were welcome to introduce other marks and comments if they thought the above scale insufficiently delicate. In fact, they often resorted to other means of recording their impressions (pluses, minuses, separate marks for suprasegmentals, etc.), in a sense creating their own system of evaluation. That was, however, unavoidable. The scale suggested to the listeners is highly deficient but a better one has not so far been elaborated. A standard grading scale in the case of pronunciation tests is even less discriminating:cf. Komorowska (1974:73), where the scale is 0 - 1 - 2, but it is meant primarily for the evaluation of segments in isolated sentences with the segment frequency exceeding the ordinary usage, e. g. *The cat ate the rat*, etc. Such evaluation was not the object of the experiment reported here: rather, it aimed at getting an over-all impression of "good" vs. "poor" accent — since the question of comprehensibility did not enter into it, with the students' proficiency in achieving phonemic distinctions and the simplicity of the text involved. However, a less impressionistic, more objective testing technique has yet to be devised. The only way to eliminate at least to some extent the subjectivity was to compute the judgement of several ("jury judgement") so as to base the conclusions on inter-subjective if not entirely objective criteria.

The over-all judgement computed from the judgements of particular listeners is significantly in favour of the experimental group. The absolute achievement of either group or each student disregarded, the relative mean improvement of the experimental group is 0.5 of a grade as compared to 0.15 of a grade in the control group, i.e. by nearly half a grade. It means that if the performance of a student in the experimental group was *fair*, his improvement — treated as a token of the average improvement of his group — would be to *fair* +, while in the control group it would be much less remarkable.

Without relying too much on these data, which will have to be corroborated by other — improved — tests of similar nature, it may at least be signalled that articulatory training of the type described above has a fair chance of improving considerably the Polish learners' English pronunciation. It must be remembered that no extra time was given to such training, but although it was conducted at the cost of segmental "postural" training, the over-all results were not poorer but better. This is important in view of the general insistence on cost effectiveness in teaching, where any time-saving device is more than welcome. It is not unreasonable to expect that the refinement of both the descriptions of the bases and the phonetic training connected with them may lead to even more statistically significant results, which will give both the principle and the technique the validity which they undoubtedly deserve.

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